



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

**Grazia Brunetta<sup>1</sup>, Valeria Baglione<sup>2</sup>**

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

**Abstract**

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

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

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1 Politecnico di Torino - Interuniversity Department of Regional and Urban Studies and Planning (DIST), viale Mattioli 39, 10125, Torino, e-mail: grazia.brunetta@polito.it.

2 Politecnico di Torino - Interuniversity Department of Regional and Urban Studies and Planning (DIST), viale Mattioli 39, 10125, Torino, e-mail: valeria.baglione@polito.it.

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

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

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

## **1. Introduction**

The concept of resilience, widely studied in ecology, has recently become part of the glossary of spatial planning.

According to an theoretical initial hypothesis, it means «*the capacity of a system to absorb disturbance and reorganise while undergoing change, so as to still retain essentially the same function, structure, identity and feedback*» (Walker et al., 2004, p. 5). This definition has been randed in the spatial metaphor of “resilient city”.

A more thorough inquiry (Folke, 2006) into the adaptive capacity of social-ecological systems instead underlined the real innovation of the concept of resilience. This second definition allows the study of a recent phenomenon in which the resilience concept has been implemented in the spatial metaphor of “transition town” (Hopkins, 2008 e 2011). This movement has already spread

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

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

In particular, the paper proposes:

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

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

## **2. Resilience. Definition, origin and evolution**

The concept of resilience has been widely studied in many disciplines (Seyfang, Haxeltine, 2009). First formulated in ecological sciences (in the 1960s-1970s), and particularly in a special branch of ecology, this concept has influenced many other research fields including anthropology, human geography and other social sciences (Folke, 2006).

Today it is the heart of the research and debate in the sustainable development field. Recently, the concept of resilience has also been discussed in the urban and regional planning sector.

### ***2.1 The origin of the concept in ecology***

Early studies in the Sixties and Seventies<sup>3</sup>, essentially based on empirical

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

analysis of ecosystem dynamics through mathematical models, focused on resilience as the capacity to absorb shocks and still maintain its functions. Holling (1973) proposed that «resilience determines the persistence of relationships within a system and is a measure of the ability of these systems to absorb changes of state variables, driving variables, and parameters, and still persist» (p. 17).

In this theoretical perspective, the consequent policies relating to natural resource management were “linear approach” type (Folke, 2006).

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

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

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

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

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

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

return to the starting point by overcoming a crisis period; in the second more inclusive one, it is the system's ability to adapt to internal and external disturbance (Gunderson, Holling, 2002; Gunderson et al., 2010).

So Folke (2006) defines resilience as the characteristic which «*emphasizes non-linear dynamics, thresholds, uncertainty and surprise, how periods of gradual change interplay with periods of rapid change and how such dynamics interact across temporal and spatial scales*» (p. 258).

Following Carpenter et al. (2001), social-ecological resilience is interpreted as (Folke 2006):

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

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

The latter definition adapts to peculiarities of the complex systems «*because it is more dynamic and evolutionary*» (Pickett et al., 2004, p. 373). It enables the use of the concept of resilience in spatial planning. Cities, by their nature, are

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

## ***2.2 Evolution of the concept in spatial planning***

What led spatial planning to tap into the ecology glossary and toolbox?

According to Pickett et al. (2004), ecology and spatial planning share both the use of metaphor and the relationship between structure and function.

In spatial planning metaphor has traditionally had a particular appeal; the most famous is Howard's Garden City but there are also the first hypotheses of bioregionalism formulated by Geddes and Mumford at the beginning of the Twentieth century.

Today the new metaphor of “resilient city” (Musacchio, Wu, 2002; Newman et al., 2009; Otto-Zimmermann, 2011) could be the synthesis between ecology and spatial planning. It suggests the vision of the city as a complex system able to withstand external disturbance and, at the same time, to react flexibly, to adapt gradually and to learn from the past. In this synthesis the metaphor, based on resilience, seems to outstrip the traditional and well-established paradigm of sustainable development. This traditional paradigm foresees growth (also in an urban context) which safeguards the wellbeing of future generations. The resilience paradigm ensures the development of urban systems through the ability to react to external disturbances by storing past experiences. In other words, it means ensuring the future, absorbing present disturbances and looking back.

In these terms, spatial planning has the aim of putting metaphor into action in a territorial dimension.

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

## **3. Resilience in the transition town movement**

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

transition town movement. We will understand how it is used in recent international experiences.

According to the main resilience definition in ecology, we can list four principal elements of application to the urban scale, as indicated below:

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

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

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

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

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

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

### **3.1 The idea of transition**

Another key assumption of the transition town movement is transitioning. The usage of most relevance to discussions on sustainability is the body of research on transition in socio-technical niches<sup>8</sup>, «[...] *protected spaces where new social and technical practices can develop*» (Seyfang, Haxeltine, 2009, p. 3). This concept has been the subject of numerous scientific projects and debates with reference to its innovative solutions and alternatives to the sustainable development topic (Foxon et al., 2008; Smith, Stirling, 2010).

Extending this concept into the social economy, Seyfang and Smith (2007) propose a model of grassroots innovations to describe «*community-led, value-driven initiatives for sustainability, which respond to local problems and develop innovative socio-economic arrangements as much as (or in preference to) new technologies*» (p. 3). The benefits of grassroots innovations for sustainable development derive principally from their creation of a space for the development of new ideas and practices, for experimenting with new systems of provision, and for enabling people to express their alternative green and socially progressive values, and from the tangible achievement of environmental and social sustainability improvements, albeit on a small scale (Seyfang, Smith, 2007; Seyfang et al., 2010).

Assuming the socio-technical niches theory, the transition town movement proposes a bottom-up paradigm of urban development which comes from the creativity of the urban community. In other words, «*the transitions movement represents an example of a new type of civil society movement, with a focus on bringing together diverse parts of a community to act and produce change and innovation at the whole systems level*» (Seyfang, Haxeltine, 2009, p. 21). Creativity becomes new ideas, practices and policies for urban management.

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

### 3.2 Origins and quantitative consistency

The transition town movement was founded in 2005 in Kinsale, Northern Ireland, by Rob Hopkins, a permaculture teacher<sup>9</sup>.

The first transition town initiative involved the small town of Totnes (2006), in south-west Britain. Starting from this initial experience, which actively began in 2009, the transition town movement quickly spread, first in the UK and then in other European and non-European countries (Seyfang, Haxeltine, 2009).

To date, we could list hundreds of initiatives<sup>10</sup> worldwide. According to recent research, the transition towns are located in Europe (about 50% in the UK and the remainder in Ireland, Germany, the Netherlands and Italy), but also in Oceania (Australia, New Zealand) and North and South America (the USA, Canada, Brazil and Chile) (Hopkins, Lipman, 2009; Smith, 2011).

Tab. 1\_Geographical distribution of Transition Town initiatives

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

Source: Bayley et al., 2010

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

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

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

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

### **3.3 Purpose and principles**

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

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

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

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

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

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

technical niches theory, these initiatives are virtuous examples of interplay between system supply/use of resources and new models of social institutions and regulation especially in terms of their influence on sustainable lifestyle (Seyfang, Haxeltine, 2009).

In particular, at local level<sup>14</sup>, transition initiatives concern crosswise all urban management fields with particular reference to oil-led ones (such as food and energy supply). For each field there is an organization subgroup that deals with strategic and propositive activities. The final goal is to outline the Energy Descent Action Plan<sup>15</sup> (EDAP).

Tab.2\_Main activities of Transition Town Totnes.

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

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

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

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

Source: Bayley et al., 2010

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

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

### 3.4 Common characteristics

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

According to the first term, the main characteristics are:

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

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

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

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

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

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

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

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

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

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

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

In particular, the resilience concept in the transition town movement emerges as a *new paradigm of urban growth and development* (Connors, McDonald, 2011) based on oil-free ideas, practices and policies for urban management. In this movement, resilience is the capacity of systems to react to the external disturbance of peak-oil. Regarding this disturbance, the transition initiatives propose new ways of using environmental resources that focus on energy conservation and closing energy cycles (eg. food supply based on local production).

However, peak-oil is not the only external disturbance (Trapese, 2008). There are indeed several external disturbances that could spark off system shocks (eg. the current economic crisis). Consequently, resilience is not only the capacity of systems to react to peak-oil disturbance but is closely linked to the adaptive and progressive capacity to react to all evolving external disturbances (Folke, 2006). It is a progressive, adaptive (also to context) and learning process, that could take a long time and may not involve all urban systems in the same way, at the same time. In this sense, the transition towns movement is only one model in terms of the use of the resilience concept in spatial planning.

As a first conclusion, we can affirm that resilience has a broad extent. It concerns the rethinking of the traditional idea of urban growth and development that outstrips the traditional paradigm of sustainability and concerns the use of resources in general (Latouche, 2005).

On the other hand, resilience concept in the transition town movement also emerges as *innate capacity of systems* to propose *bottom-up ideas, practices and policies for urban management*.

In fact, extending our gaze to the nature of the phenomenon itself, the transition town movement is a social movement – like several others - that provides solutions in order to manage urban complex systems, especially on a local scale.

As Jane Jacobs said (1961), the renewal of cities – as complex systems – is innate in the capacity and interest of citizens. The transition town movement was indeed born in and spread through the urban context and it is a practical reaction promoted by the urban community. The movement never refuses the idea of the city. Bottom-up strategic actions aim at new common and shared solutions in terms of urban management.

In this sense, the concept of resilience underlines how some events could be chances to improve the current system status, trigger social mobilization,

recombine sources of experience and knowledge for learning, and spark novelty and innovation. It may lead to new kinds of adaptability or possibly to transformational change (Folke et al., 2010).

As a second conclusion, we can affirm that resilience is the innate adaptive capacity and creativity of urban systems to react to various external disturbances and propose new paradigms of growth and development. In other words, system reactions to external disturbances (not only peak-oil) are not related to top-down solutions but to solutions innate in the systems, especially in their characteristics and memory.

According to both meanings of resilience in spatial planning – as a *new paradigm of urban growth and development* and *innate capacity of system to propose bottom-up ideas, practices and policies for urban management* – we can stress that it is an approach, a way of thinking, able to propose a *new territorial governance perspective* (Folke et al., 2002).

This new territorial governance, based on the concept of resilience, concerns urban systems management relating to bottom-up learning capacity and the adaptive ability to propose new paradigms and practices. In other words, it means rethinking urban management through a new rules framework that concerns the three features of *stakeholders*, their *roles* and consequent *tools*, as follows:

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

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

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

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