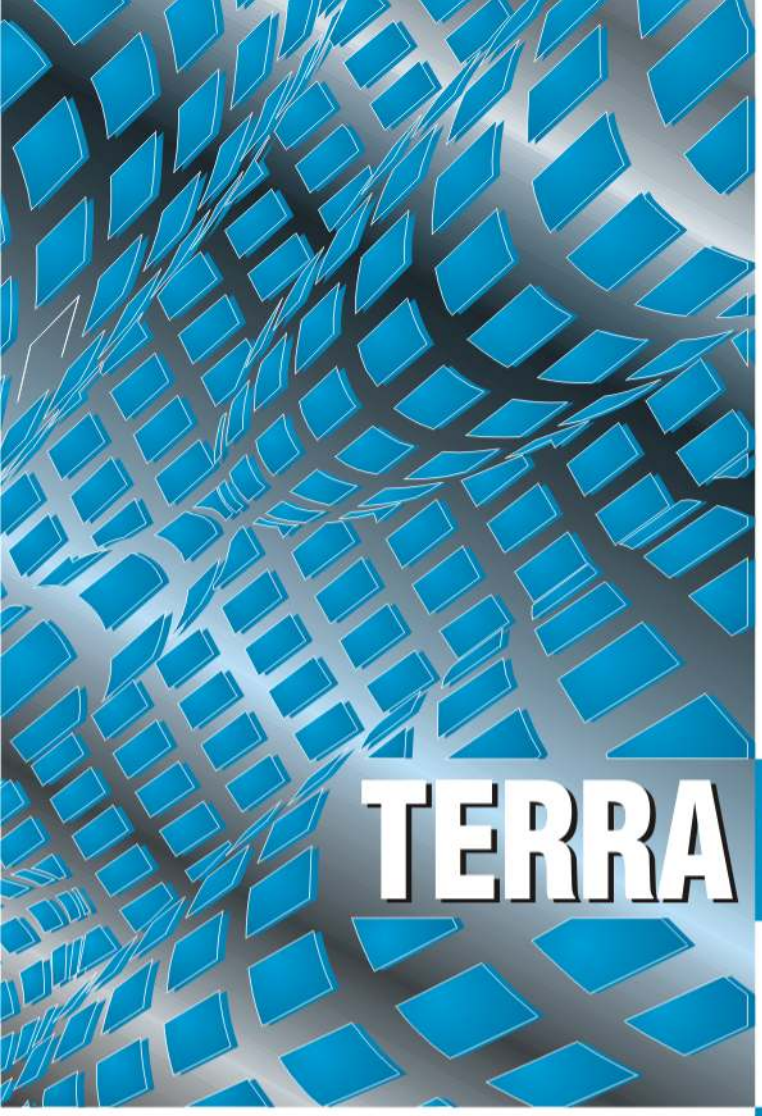

STU

TERRA SPECTRA

Planning Studies

Central European Journal of Spatial and Landscape Planning

1 2015

SPECTRA
Centre of Excellence

VOLUME VII
1/2015

TERRA SPECTRA STU

PLANNING STUDIES - CENTRAL EUROPEAN JOURNAL OF SPATIAL AND LANDSCAPE PLANNING STU

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Publisher : STU Bratislava,
SPECTRA Centre of Excellence EU

Layout and Printing: *ROAD* Bratislava, 2015

ISSN 1338-0370

THIS ISSUE WAS SUPPORTED BY:
THIS CONTRIBUTION IS THE RESULT OF THE PROJECT IMPLEMENTATION: SPECTRA+ NO. 26240120002 "CENTRE OF EXCELLENCE FOR THE DEVELOPMENT OF SETTLEMENT INFRASTRUCTURE OF KNOWLEDGE ECONOMY" SUPPORTED BY THE RESEARCH & DEVELOPMENT OPERATIONAL PROGRAMME FUNDED BY THE ERDF

Contents:

FOREWORD

The broad scale of the problems in the spatial development in central European space is a big challenge for spatial planning practice, theory and education. New tasks and new frameworks, brought by current development of the formation of knowledge based society, require the implementation of new approaches, new methods and new instruments in the spatial development management, new understanding of the role of planning. Those challenges address young generation of researchers in spatial planning, who present their papers, mostly presented during the Young Academics AESOP Summer School 2015 in this issue of TERRA SPECTRA.

The effort of their research work is to contribute towards sustainable development and the processes of economic, social and cultural integration in Europe as well as towards its territorial cohesion with the interdisciplinary research and education emphasizing the integration of landscape-ecological, economic, social and technological aspects. Research and the proposals, focused on optimising of spatial structures contribute to the fulfilling of the criteria of sustainable spatial development to balancing the regional disparities and at the same time to preserving cultural and ecological diversity, to improving the quality of life and to strengthening of social cohesion in Europe. Interdisciplinary based research projects of young researchers have been focused on creative research work on the issues of complex planning of sustainable spatial development with the focus on optimising the functional use of territory, including economic and other activities, mobility, relations and functioning of urban and rural structures, creation of sound environment for living, preservation of cultural heritage and ecological balance, based on cooperation with the population and other stakeholders of spatial development.

I believe that the papers will address academic society in the field of spatial planning in the whole Europe to see the topics and projects of young researchers in the CEE countries and at the same time bring impulses for their own research. Moreover, it is extremely important to support networking of young researchers and young academics in order to understand common challenges for their research work.

Maroš Finka
Guarantor of issue

Alessandra Feliciotti

SOCIO-ECOLOGICAL RESILIENCE AND URBAN DESIGN: DEFINING THE COMMON GROUND AND A WAY FORWARD FOR PRACTICE

The macro-trends revolving around urbanisation call for revising current approaches to urban development. In this context, the concept of resilience, originally developed in system ecology, has been deemed as a useful framework to address to these challenges and as an explanatory method to describe the complex dynamics regulating urban systems. However, while resilience science has gained importance in the academic debate in vulnerability and risk management, urban planning and governance, it is only superficially investigated in the field of urban design. This paper aims at bridging the gap between urban design and socio-ecological resilience, advocating a resilience-based approach to the design of urban systems. Currently, existing literature addressing the relationship between urban design and resilience focuses on two main issues: 1) the need for a common ground upon which to build the bridge between socio-ecological resilience and urban design; 2) the need for a clear and solid conceptual framework for urban designers to foster resilience in the built environment. The paper formulates suggestions on how these issues could be addressed. These are: 1) the definition of urban morphology as the common ground upon which the bridge between resilience in system ecology and in urban design should be built, and 2), on this common ground, the definition of a research route to link approach to sustainable urban design to socio-ecological resilience. The paper concludes by presenting possible future research steps.

Introduction

PIn the next future, influenced by the global macro-trends of climate change, economic instability, demographic and lifestyle change, and technological innovation, urban areas will grow in scale, number and complexity (United Nations 2014). Simultaneously resources to build and maintain them will diminish (UN-Habitat 2012). To respond to these pressures, urban planners and designers will have to deal with problems largely different from those they dealt with over the last 150 years (Dunham-Jones and Williamson 2011; Rudlin and Falk 2009). This calls for new approaches to urban development conducive to environments that are gifted with identity on the ground of their ability to welcome change over time by the hands of their users (Porta and Romice 2014). However, many of the places created since the post-war years seem unable to display this crucial capacity (Tachieva 2010). In fact, these appear more prone to prevent change from taking place rather than to support it. By the end of the century, in Global North's cities much of the post-war buildings and infrastructure will undergo extensive maintenance or refurbishment, and even more will be built afresh in the expanding centres of the Global South (Novotny et al. 2010). Hence, rediscovering this ability will be crucial for the prosperity and, indeed, the very survival of our cities.

Introducing Socio-ecological resilience

Contemporary urban problems are characterised by great complexity (Roggema et al. 2011). Additionally, the socio-economic, environmental and physical processes taking place in cities are highly interdependent and interlinked at multiple scales (Pickett et al. 2013). Hence in order to find more effective ways to study, manage and design cities, a system-wide holistic approach was advocated (Wilkinson 2012).

To answer this need, research in system ecology on socio-ecological systems started to permeate the discourse on cities (Pickett et al. 2004; Walker and Salt 2006). Socio-ecological systems are complex, nested and interconnected bio–physical systems co-evolving across spatial and temporal scales (Folke et al. 2002). They share many similarities with urban systems (Chelleri 2012; Holling and Goldberg 1971; Marcus and Colding 2014; Novotny et al. 2010; Walker and Salt 2006). Consequently, urban systems have recently been studied as a particular type of socio-ecological systems (Alberti and Marzluff 2004; da Silva et al. 2012; Moench 2014). In particular, the associated concept of resilience gained attention as a way for understanding the multilevel complexity, unpredictability and non-linearity characterising dynamics of change in urban systems (Davoudi et al. 2012). The concept of resilience firstly appeared in the field of system ecology in the seminal work of Holling (1973). He identified resilience as "a measure of the persistence of systems and of their ability to absorb change and disturbance and still maintain the same relationships between populations or state variables" (p.14).

Over the decades, several definitions of resilience were coined to describe its many facets (Olazabal et al. 2012). Among these, socio-ecological resilience (Wilkinson 2012) describes a system's property "to absorb disturbance and reorganize while undergoing change so as to still retain essentially the same function, structure, identity, and feedbacks" (Walker et al. 2004 p.2). In this notion of resilience, the element of change – internal or external, gradual or sudden – is seen to have a positive rather than negative connotation and is considered as "necessary for renewal and novelty" (Marcus and Colding 2014 p.7); this is one of the reasons why, this particular definition seems to be most popular in the context of urban studies. Indeed, according to Wilkinson (2012), socio-ecological resilience provides a useful problem-setting and problem-solving

framework that planners can use when confronted with non-linear and relational urban dynamics. In this sense, resilience thinking can help driving urban development towards desirable trajectories, recognising the possibility of occurrence of future shocks and leaving room for nov¬elty and innovation.

The missing link between resilience and urban design

Currently, resilience thinking is most commonly encountered in relation to emergency planning (Liao 2012), climate change mitigation (Brown et al. 2012), community vulnerability to catastrophic events (Paton and Johnston 2001) and disaster recovery (Vale and Campanella 2005). Moreover, in the last few years, resilience theory has increasingly been discussed in urban theory (Davoudi et al. 2012, Chelleri 2012).

However, in urban design, the concept of resilience is just starting to be investigated (Ahern 2013; Allan and Bryant 2011; Marcus and Colding 2014; Pickett, Cadenasso and McGrath 2013; Roggema 2014). When treated, the prevailing line of research is still on risk prevention/ mitigation strategies and recovery from catastrophic events (Allan and Bryant 2011; Garcia 2013). Another recent strand of research looks at the role of the hard physical infrastructure in deploying resilience-enhancing strategies (Novotny 2010). However, as noted by Roggema (2014) most references to the spatial form of cities seem limited to sewage systems, water management, energy production or communication lines. There is still very little reference to fundamental morphological elements of the built environment, as plots, buildings, streets, blocks and public spaces. This sharply contrasts with urban designers' approach which is in return strongly focused on such aspects. On their hand, urban designers may well recognise how cities are characterised by complexity (Carmona 2010; Jacobs 1961), but they rarely embed in their projects knowledge developed in disciplines such as system ecology (Ahern 2013; Pickett, Cadenasso and Grove 2004; Roggema 2014). Too often, in the vocabulary of urban designers, the term resilience remains little more than a buzzword (Stumpp 2013), it lacks a clear definition and "is rarely discussed in much depth" (Allan and Bryant 2011 p.38-39).

A research approach to bridge the gap between resilience and urban design

From analysis of available literature addressing the relationship between urban design and resilience, two fundamental issues emerge:

1) The need to identify a common ground upon which to build a bridge between socio-ecological resilience and urban design (Davis and Uffer 2013; Garcia 2013; Marcus and Colding 2014); and
2) The need to provide a clear and solid conceptual framework to urban designers to foster resilience in the built environment (Anderies 2014; Marcus and Colding 2014; Pickett, Cadenasso and McGrath 2013; Roggema 2014; Wilkinson 2012).

The next two sections will explain how these two issues could be respectively addressed.

A common ground

The model of socio-ecological resilience and urban design share the basic assumption that through intentional intervention it is possible to transform existing situations into preferred ones (Wu and Wu 2013). The first aims at influencing the resilience of ecosystems via the manipulation of their geometric and functional characteristics (Garcia 2013; Marcus and Colding 2014). The second is largely about driving socio-economic and environmental change towards desired goals via the manipulation of elements constituting the built environment (Carmona 2010; Rudlin and Falk 2009; Tarbatt 2013). These, according to urban morphology (Conzen 1969), can be identified as plots, buildings, streets, blocks, up to larger aggregates, as sanctuary areas (Dibble et al. 2015), neighbourhoods, districts, cities, regions and so on.

It is here suggested that the bridge between the science of resilience and urban design can be built on the common ground offered by urban morphology. The discipline of urban morphology studies dynamics of evolution and change in the form of urban settlements across space and time (Whitehand 1981). Conzen (1969), founder of the morphogenetic approach, believed that urban fabric and society were deeply inter-linked and co-evolving. In this urban morphology is not too dissimilar to socio-ecological resilience, whose focus is on how ecosystems are structured, how they respond to disturbance and how their physical and biological dimension are linked together (Chelleri 2012).

There is already some interest (Davis and Uffer 2013; Garcia 2013; Marcus and Colding 2014; Roggema 2014) in understanding "how urban systems and more specifically their spatial form can be understood in terms of a resilience framework" (Marcus and Colding 2014 p.10). By using urban morphology as a common ground, it might be possible to guide urban designers in the adoption of particular spatial patterns that could help increase the system's capability to respond to change and uncertainty.

Few works that target the link between resilience and urban form in cities already exist. Initial attempts to conceptualise and evaluate resilience in the urban form were recently made by Davis and Uffer (2013) and Marcus and Colding (2014). The firsts tried to preliminarily explore the resilience of urban form by suggesting 'measures' of environmental, physical, economic and social resilience through the comparison of 8 case studies. The seconds tried to translate general properties of resilience into spatial form using Space Syntax Theory (Hillier and Hanson 1984).

Additional work was also done by Garcia (2013): he applied the textural discontinuity hypothesis used by Holling (1992) to describe lumps in size of mammals in an ecosystem, to describe discontinuities in elements of the urban form. In particular, in his work he specifically refers to the Conzen's morphogenetic approach (Garcia 2013). These efforts are valuable however they appear still too episodic. More research needs to be built upon these contributions.

It must be stressed that this paper is not advocating for any deterministic causality between urban form and other social, cultural, environmental, economic urban dynamics. Cities are embedded in unique socio-economic, institutional and environmental contexts (Davoudi et al. 2012). Awareness of their "many interconnections, overlaps, and backloops" (Marcus and Colding 2014 p.4) is crucial. We acknowledge that the capacity of places to exhibit resilience does not rest solely on those aspects of urban form that can be object of design intervention. However certain resilient behaviours, which spontaneously emerge in cities, can be facilitated or impeded by the characteristics of the physical environment they are embedded in.

Evidence-based research shows how tangible elements of urban form, as land-use mix, plot grain, street network connectivity etc. correlate with non-tangible aspects of urban life, such as economic viability, adaptability, creativity, sociability and stewardship (Barton et al. 2010; Porta et al. 2012; Porta et al. 2014; Wood and Dovey 2015). A link exists between the capacity of places to adapt to contextual change and particular spatial patterns. Evidence shows that (Tachieva 2010) when facing contextual change (i.e. economic recession), there are urban forms that can change almost seamlessly while others require highly expensive intervention in natural, organisational, economic and social terms. Hence, whilst resilience of urban systems cannot be determined by the design of urban form, this can still play a fundamental role in producing "more or fewer opportunities for present and future developments in the same urban landscape" (Garcia 2013 p. 68).

A conceptual framework for resilient urban design

If urban designers aim at shaping places able to meet effectively the challenges of future urbanisation, a solid conceptual framework that links urban design to socio-ecological resilience is needed. However, in order to achieve this goal, it seems appropriate that we refrain from simply transplanting the system-ecology approach to resilience into urban design. We should rather integrate it with existing and consolidated urban design research methods and paradigms.

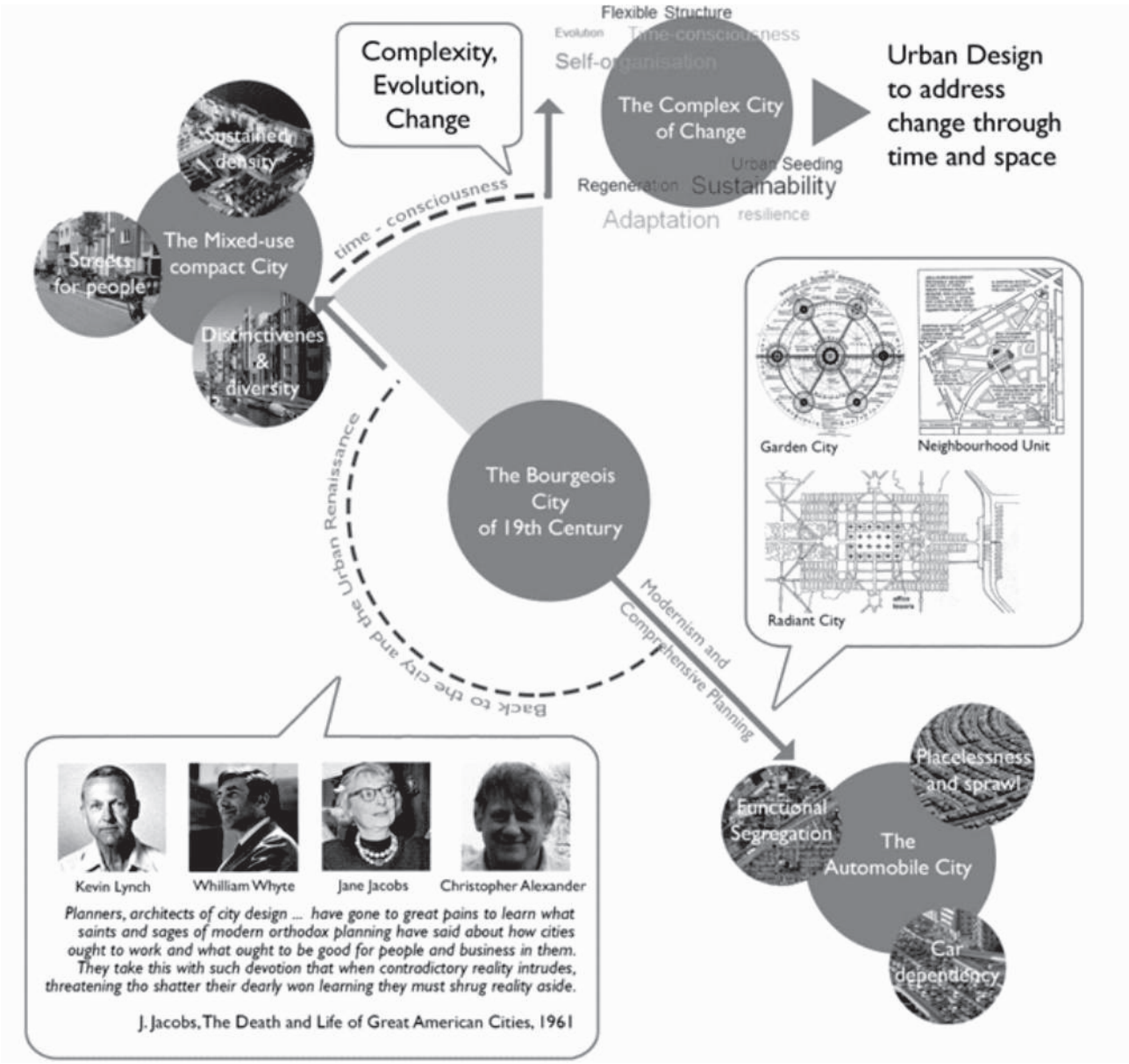
Over the last three decades the sustainability agenda brought about in urban design an important paradigmatic shift (Porta and Romice 2014). This led to the adoption of new guiding principles that better reflected values of those practitioners, scholars and communities unhappy of the trajectories of post-war urban development (Beatley 1999; Carmona 2010; Rudlin and Falk 2009). These principles were accompanied by new methodologies and implementation strategies that were subsequently tested, discussed, revised and tested again over the last twenty years. Urban designers started advocating for diverse, inter-connected, transport-oriented and pedestrian-friendly places, catering for varied forms of ownership, encouraging energetic and economic self-sufficiency, stimulating new forms of appropriation and use of the space (Beatley 1999; Carmona 2010; Rudlin and Falk 2009). This transition led to what Porta and Romice (2014) refer to as the "Sustainable compact counter-revolution" (p.84) (figure 1).

However, in the last decade the very idea of sustainability has changed. Contributions from urban geography and complexity theory (Batty 2013; Portugali 2011), started percolating the urban design discourse (Bettencourt 2013), supported by the influential ideas of Jane Jacobs (1961). Intuitive understanding of the concept of resilience started to be embedded in many guidelines and principles as a corollary to sustainability (Carmona 2010). Even when the term resilience is not explicitly used, there is considerable overlap of scope between sustainability in urban design and resilience thinking (Cruz et al. 2013). This seems to suggest that a proto-shift from sustainability to resilience might be already happening. To make this explicit it is suggested that we re-read the current tenet of sustainable urban design through the lens of resilience, formalising a new "paradigm shift" from place-making to time-conscious place-making (Porta and Romice, 2014).

In a previous article, Feliciotti et al. (2015) tried to preliminarily explore this research direction. In that occasion they tried to make a transition from sustainability-driven urban design to resilience-driven urban design. They did so by identifying in literature fundamental attributes of resilience for different types of socio-ecological systems and by integrating them with sustainability-driven principles of urban design. At the end of the paper, they presented a series of fundamental guiding normative principles for resilient urban design to be potentially translated and adapted in case-by-case intervention.

Conclusions and next steps

There are still many challenges to the transfer of the concept of socio-ecological resilience into urban design. While the ecological analogy is tempting, cities are not natural systems. They are governed by principles of self-organisation and emergence, as much as they are planned and controlled by outside authorities (Kostof 1991; Portugali 2011), an aspect that the resilience literature has yet to fully address (Davoudi et al. 2012, Wilkinson 2012).



Picture 1 - 150 years of paradigm shifts in Urban Design: from Rationality to Resilience, elaboration by the author from Porta and Romice (2014), **and Thwaites et al.** (2007).

Nevertheless, we strongly believe that a resilience framework could help designers creating places, streets and neighbourhoods able to retain their identity and to endure culturally, socially and environmentally over time, while continuously evolving and dynamically adapting to contextual conditions. Urban designers need to embrace the dimension of time and change in the context of uncertainty of future outcomes and unpredictability of events, if they seek to shape places able to endure culturally, socially and environmentally, but also to "learn" and innovate. This requires designers to find ways to devise structures resilient enough to accommodate needs and choices of society over time.

This work presented the state of research on the relationship between urban design and resilience. It then exposed two fundamental issues standing in the way of bridging the gap between them. Finally, it presented in some detail how the author will try to address them in her wider PhD research. In the intentions of the author, this will require, on one side adopting an urban morphological approach and, on the other, defining a conceptual framework and normative guiding principles for resilient urban design.

A further step, would be to identify a set of resilience-driven indicators that can be deployed to analyse urban environment and assess urban design projects. These indicators could be identified among those developed in urban sustainability and system ecology research (Cruz et

al. 2013; Davis and Uffer 2013). The deployment of such indicators could represent a major contribution for informed, evidence-based design intervention and for post-implementation monitoring of urban design projects, whose lack is lamented by both system ecologist (Ahern, 2013) and urban designers (Carmona, 2014). There are challenges to this, particularly as "it is difficult to define the most adequate degree of compactness, density, connectivity and heterogeneity" as "there is evidence that the supporting ecological systems react differently in different contexts and scales" (Cruz et al. 2013 p. 65).

However, it is hoped that by offering a perspective coming from a still poorly explored field, important steps ahead can be made in the development of an advocated multidisciplinary and integrated approach to urban resilience (Olazabal et al. 2012).

Acknowledgment

This contribution is the result of the project implementation: SPECTRA+ No. 26240120002 "Centre of Excellence for the Development of Settlement Infrastructure of Knowledge Economy" supported by the Research & Development Operational Programme funded by the ERDF

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Milan Husár

CITIES OF TOMORROW? SMART CITY AS AN IMPERATIVE FOR SUSTAINABILITY IN THE FUTURE

On October 20th and 21st 2014 a scientific workshop titled Innovation in Assessing and Governing Low Carbon and Smart Cities took place in the city of Milan. Event was hosted in prestigious Bocconi University , one of the leading Italian economic universities. Representatives of the European Union (EU), United Nations (UN), scientists from a variety of universities and research centers as well as representatives of municipalities took part in the workshop where they could present their views on issues of contemporary cities, on current state of smart cities and low carbon cities and discuss the implications for their future. Spectra Centre of Excellence was also present as a member of COST (European Cooperation in Science and Technology) network.

According to the OECD, cities cover roughly 3% of Earth's surface, but currently around 50% of world's population live there. They consume until 75% of global resources and produce 50% of waste and more than two thirds of green-house gas emissions (OECD, 2010). Moreover, approximately 1 billion people live in so-called urban slums (poor urban districts). This increase in urban population should continue, in 2050, 75% from estimated 9 billion people on Earth should become urban dwellers. Each second, there are two more urban dwellers on Earth. Not only these figures, but even casual look at contemporary cities in Europe suggests that cities are those which are responsible for being sources of global problems such as global warming or scarcity of natural resources.

On the other hand, cities are also spaces of innovations and creative human potential and it is expected that exactly in cities the responses to aforementioned challenges will be found. From the point of view of smart cities and innovations, the cities at the same time can serve as laboratories for various experiments and those which are successful can be replicated in other cities and towns and this way arguably it is possible to deal with many present challenges. Event such as this workshop subsequently serve as inspiration and transfer of know-how for other cities and administering structures where professionals can exchange experience, compare their approaches to problem-solving, share ideas and information and evolve and grow together.

SPECTRA Centre of Excellence at Slovak University of Technology in Bratislava / SPECTRA+ Centre of Excellence for Smart Structural Development of knowledge-based economy is a research center in field of spatial planning. Among its partner institutions belong ARL (Akademie für Raumplannung) Hannover, IUG (Institut d'Urbanisme de Grenoble) Grenoble and Newcastle University . Since its founding in 1999 the center is dedicated to transdisciplinary research, since 2009 in cooperation with Faculty of Natural Sciences of Comenius University and Institute of Forecasting of the Slovak Academy of Sciences .

Activities of the center are focused on smart cities, part of the center is also Center for settlement infrastructure of knowledge-based economy which serves as support of innovations in field of spatial planning focused on sustainability in urban, landscape and strategic planning – Center for Smart Cities. Key research area for Smart Cities research is transfer of know-how which is being done through our urban innovation network as international networking project of cooperation between Slovak University of Technology in Bratislava , Technical University in Prague , Vienna Technical University and 6 more universities. This project is also supported by CEEPUS (Central European Exchange Program for University Studies) initiative of the EU. Last, but not least, part of the Center is also Center for smart structural development which concentrates its activities on topics of smart city urban development with emphasis on smart land use and smart structures for urban development.

COST (European Cooperation in Science and Technology) initiative is one of the oldest European projects supporting the transfer of knowledge. It is not about new research production, as is usually the case of similar initiatives, but it supports exclusively networking between partners by its budget of 700 000 EUR. The objective is not only refunding the travel costs for participation in scientific conferences and workshops, but also planting seeds of new collaborations between scientists and research institutes which consequently produce more robust research of higher quality.

Two day workshop was split into 4 panels where the presentations were given by representatives of European Commission, UN, municipalities and scientific community. The event was opened with speech by Andrea Sironi, Bocconi University Chancellor who took the patronage over the event and welcomed the participants.

The main organizer, Edoardo Croci, initiated the workshop from professional standpoint. Croci specializes on topics such as environmental economy, sustainable, low carbon and smart cities or green economy and the environment. Currently he works as a researcher for IEFE – Center for Research on Energy and Environmental Economics and Policy at Bocconi University. He concisely and clearly introduced the topic of issues the cities face nowadays, he referred to cities on the one hand as a source of global problems and challenges, but, on the other hand, as spaces where solutions for these can be found as innovation for improving the status quo are bred here. Last but not least, he suggested that the key to success is

focusing on the largest sources of pollution in cities – green-house gas emissions emanating from transportation (World Bank, 2013).

Another opening speech was given by Paolo Bertoldi from European Commission, department of renewable sources of energy and energy effectiveness – Directorate-General of the European Commission Joint Research Centre . The Centre's main task in the Covenant is to produce and support robust customer-driven scientific and technical support to Community policy making. In his presentation he referred to EU 20-20-20 (EC, 2014) energy strategy (20% reduction in EU green-house gas emissions from 1990 levels, 20% share of renewables on EU energy consumption and 20% improvement in EU's energy efficiency). Based on the latest data it seems that defined objectives will be met all but the last one – 20% improvement in EU's energy efficiency and he emphasized the need to focus on local level on order to meet these objectives. New EU energy directive (EC, 2012) was introduced which is focused on these four areas: sectoral measures (public sector, households, services, energy supply, industry), general measures promoting energy efficiency, indicative national energy efficiency targets and monitoring and reporting.

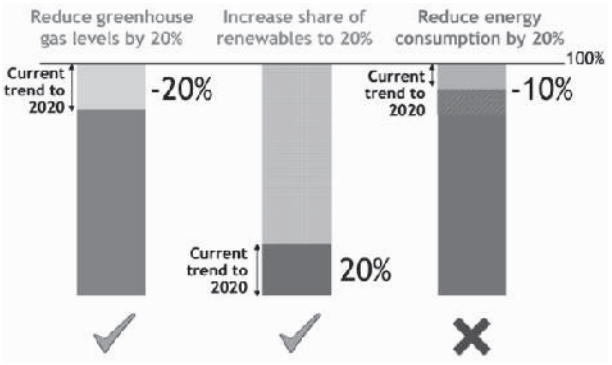

Figure 1: **Current level of meeting the objectives of EU 20-20-20 energy strategy**
(source: DG Energy, 2011)

Energy directive is a case of top-down initiative, but it is important to mention also existence of bottom-up initiatives – here the initiative is taken from individuals, various NGOs (non-governmental organizations) or NPOs (non-profit organizations). Such an instance is the Covenant of Mayors through which the cities can set for them individual, more ambitious goals. This Covenant has established good position and one of its objectives is to serve as a platform for sustainable energy policy for towns and cities on local level. Here it means mostly, but not exclusively, regulation of energy consumption of buildings which bear the largest share of energy consumption in cities (Covenant of Mayors, 2015). This notion ended Bertoldi's presentation and the first panel titled Monitoring, measuring and benchmarking was opened.

The first panel was opened by Edoardo Croci who attempted to define a smart city. In the introduction he mentioned the dichotomy low carbon city, characteristic by high living standards and energy efficiency, and smart city, focused on social capital, sustainable infrastructure, economic growth and effective use of resources (Nijkamp et al., 2009). Out of both concepts, it is possible to deduce several characteristics of these future cities – economic and environmental efficiency, participatory governance, technical and social innovations, quality of life and urban carbon mitigation policies and measures. These notions were attempted to be transformed into smart city definition – a city able to accumulate, preserve, integrate and enhance its capital endowments – physical, natural and social capital. To achieve this status it is important to create common metrics to measure the advancement in the key measures and compare smartness. He elaborated on classification of cities based on their rankings among other cities (for example TU Wien, University of Ljbjana, TU Delft, 2007). This idea has one principal flaw – each author chooses different criteria and therefore it is difficult to compare these and also the issue is the weighing the individual criteria then doing the evaluation. This makes the ranking rather inconsistent.

Croci finished his contribution by presenting key positive effects of smart cities from his professional point of view – positive externalities, economies of scope and scale (their value is typically not captured today) and individual smart project values (value typically captured today) (The Climate Group, Accenture, ARUP, Horizon, 2012); and by pointing at priorities of European smart cities – sustainable urban mobility, sustainable districts and built environment and integrated infrastructure and processes (European Innovation Partnership on Smart Cities and Communities, 2013).

In the following presentation Andrea Bondi, representative of European Innovation Partnership (EIP) on Smart Cities and Communities, presented smart cities based on rationale of this organization – integrating energy efficiency, transportation and information communication technologies. One of the main points was that smart city cannot exist without smart citizens – need to include citizens into processes leading up to smart cities as a part of this effort. From February till June 2014 commitments were invited from cities, communities, companies, research and individuals to commit to voluntary intentions to support one or more priority areas of Strategic Implementation Plan of the Smart City EIP (the plan available on http://ec.europa.eu/eip/smartcities/files/sip_final_en.pdf). During this period 441 commitments were collected and 370 of these were eligible. This way, more than 3 000 partners became committed, 36% of them were from public and 26% from private sector.

In order to foster these commitments 6 so-called action clusters were created –

(1) integrated infrastructure & open data;
(2) integrated planning and management & policy and regulation;
(3) sustainable mobility;
(4) business cases and funding;
(5) sustainable districts / built environment; and
(6) citizen focus (EC, 2014).

Objective of these action clusters is to foster more concerted action to get markets moving and to bring together innovative ideas and actions from across Europe to support a dynamic market place. In the conclusion the role of indicators was mentioned once again as in markers for cities and other subjects for comparison and inspiration.

The themes of second panel were standards and protocols. These are fairly new trend, although in the past there were several attempts to create them, but these usually achieved only limited effects and unity, only about 6 out of 80 were universal. The idea behind these standards is to provide on the one hand possibility to compare subject with others (e.g. cities in fulfilling their commitments), and on the other hand they serve guides for taking measures which should bring desired effect. They fulfil the role of a tool for politicians and planners to determine objectives, measures and to monitor this process. This way, these standards help to make city governance effective, transparency, sustainable planning or foster mutual learning among towns and cities. These data are not new, it is mostly about new approach to them and unifying the standards which increases their utility value across the subjects. They also enable monitoring the efficiency of invested finances and the city can calculate the biggest expenditure items and propose proper measures. Another added value of indicators is allowing comparison of data across various scales, from zonal to city-wide scale.

Vice President of World Council of City Data Nico Tillie introduced norms ISO/TC 268 – Sustainable development of communities and ISO 37120 – International standards for city indicators as a pilot project of the Council which was introduced on May 15, 2014. It consists of 100 indicators, out of which 46 are core and 54 are supporting indicators (World Council on City Data, 2014). These are divided into 17 themes, such as economy, education, finance, health, safety etc.

The following contribution was provided by Saviour Alfino from British Standard Institution . The presentation was commenced with figure that in the following two decades 2.5 million people in China and India are moving out of poverty into middle class and will create new urban middle class (OECD, 2010) (for better illustration of this number, every year five new cities of a size of Milan City are built in China and two in India). This has far-reaching consequences not only for cities alone, but also on global consumption of energy and materials and creates requirements to planning on all levels. Although each city has its unique context, many of the problems are shared and common and these standards and indicators are some of the tools to deal with them. Role of standards was regarded as crucial as they provide the right conditions for open innovation and seamless integration, they support creation of new products, services and business models, aid systems working as a whole into which offerings fit and this all results in productivity increase and hence improved quality of life.

Second day of the workshop was commenced by the beginning of the third panel titles Evaluating Climate Governance Innovations: Assessing low carbon and smart cities. It was moderated by Andrew Jordan from West Anglia University , the Chief of COST initiative, focusing in his research on themes of public administration, environmentalism and their relationships within the EU. The following contributions were given by renowned scientists who described the status of current knowledge in field of governance and dealing with climate changes. Cities are highly dynamic entities and therefore the interventions and measures taken today have inertia with long-lasting consequences. For a long time the policies on climate change focused either on mitigation of the changes in the atmosphere or on adaptation to these changes, but the contributors agreed that there is close interconnectedness between the two and we have to look at them as one indivisible whole, two sides of the same coin. As these are global challenges, coordinated common approach and creation of common framework for these policies are crucial. At the same time it is important to stress that each of us is responsible and affected by these changes in the atmosphere, but to a different extent, as well as their impact is different for different sectors. Changes of climate have to be perceived a global externality and a sort of 'common bad'. It is this avoidance of accountability that creates some of the biggest obstacles for any procedures.

On the other hand, this responsibility has also another form. Western world had been developing for a long time in so-called conventional way using traditional sources of energy (coal, crude oil and natural gas) and there is an extensive agreement among climate scientists that this was one of the root causes of the climate change. In the last decades the countries such as China or India (also known as countries of Global South) are trying to develop to reach western standards using the similar processes. In the light of international pressures on these regions to develop in more environment-friendly way, the question can be put like this: what gives us the right to ask this? Sure, we can argue that such a consumption and emanating consequences will affect their future generations, however fundamentally it is a matter of ethics and sort of paternalism of western world especially when considered that not even in these efforts the west is unified.

Within the frame of smart cities and climate change the concept of multilevel governance comes into foreground as an idea on the one hand to fill the gaps on vertical level of public administration, and on the other hand opening up the governing and decision making processes to various

other actors (Hooghe & Marks, 2003). The objective is effective interaction between political levels of decision making in order to improve the coordination and coherence of decisions and interventions. The role of regions is emphasized as an optimal level for implementation of decision and interconnectedness and transformation of policies on supranational and national level to local level.

Common unified approach was regarded as a priority in the following areas: energy infrastructure planning, design of planning procedures compatible with climate measures, use of natural resources and conflict management, comprehensible monitoring of energy consumption ad green-house gas emissions, innovative financial mechanism design, implementation of complementary supportive policies and strengthening of technical know-how within sustainable energy. Coopenergy project was introduced as a three-year long initiative supported by the EU with main objective to help local and regional bodies to create action plans on the basis of multilevel governance. Among other, it helps identify and support transferable models of effective cooperation, mobilize regional and local authorities and enable their collaboration, demonstrate of common activities on both levels, support transfer of knowledge and their replication and promote EU policies. The outputs are action plans of sustainable energy which are evaluated by project participants and these propose measures for success. Keys to success were identified factors such as shared vision, functioning partnership, stakeholder involvement, affordable funding, professional energy planning and processes and structures supporting multilevel governance.

The final part of the workshop was dedicated to the last panel and the theme of financing and action plans. Mostly the examples of using the financial mechanisms of the EU, e.g. JESSICA – Joint European Support for Sustainable Investments in City Areas, which provides financial support in areas such as urban infrastructure, cultural heritage, restoration of neglected areas or improvements in energy efficiency. A case study of Sardinia and their use of this mechanism were presented together with summary of efforts of Sardinia political and municipal representatives to form a smart city through the help of this financial mechanism.

Between the contributions of EU and OSN representatives focused on political standpoint of smart cities and scientists presenting scientific research if these areas, several case studies of EU cities were presented regarding their experience and expertise with concept of low carbon and smart cities. First case study was the Netherland's capital Amsterdam . This is the city which traditionally is in majority of city rankings in top positions. Amsterdam metropolitan area covers the space encompassing 2,4 million people, 36 municipalities and their innovation multiplier is 4,5. Project of transforming the area into smart city includes interplay of more than 100 partners. These set as their main goal to create the smartest city in Europe.

They chose the approach of seeing the city as living laboratory where they could apply and test innovations. Within the Seventh Framework Programme of the EU there are at the present time two projects running – TRANSFORM project focused on low carbon economy; and CITY-ZEN project aiming at putting an emphasis on central role of citizens as key stakeholders. Amsterdam slogan is that smart cities are about cooperation and collaboration. Regarding the role of standards, they informed the audience that in 2016, when Netherlands will be in the chair of the EU, the country will focus their efforts into supporting and promoting measures aimed at facilitating smart cities.

Next case study worth mentioning is another north Italian city Torino. The city launched SMILE initiative aiming at increasing the quality of life in the city through promoting clean and sustainable mobility, reductions in energy consumption, production of top-level technologies and offering services and accessibility. Program has five focus areas: energy, inclusion, integration, life and health and mobility. You can see some parallels with Amsterdam and strategic objectives and trends mentioned above which suggests the right direction of the initiative.

Smart cities and knowledge-based economy are hot topics not only within scientific circles, but also on the level of policies on supranational, national, regional and local level. Recently there were local election in our country and these topics were mentioned again and these ideas shall arguably help our cities. The question remains, if and how will new representatives of our municipalities handle them and whether they will succeed in embed these principles into operation of our towns, cities and regions and how will these entities develop. There are many examples, better or worse, and it is crucial to learn from them and adapt the ideas into local context. However, it is not only about official bodies and politicians, as Andrea Bondi suggested, smart cities are nothing but plain utopia without smart citizens. The change in peoples' minds is required. The cooperation between the municipality and citizens and other stakeholders is emphasized and this should be supported not only by the city itself, but also people and other subjects should seek this right and participate, even in unconventional ways, on city management and administration.

Smart cities are phenomenon oriented primarily on process rather than the result itself. It is difficult to set specific end state to be achieved as these are more abstract terms which are hard to materialize. However, there are several characteristics and vision of smart cities which help the process. These were mentioned several times in the article, they are especially the following – energy efficiency, lower rate of green-house gas emissions, quality of life, sustainable mobility etc. At the same time, cooperation on and between various levels is emphasized, from local to supranational (EU) and nation states. Ideally, this process is linear, with no artificially made obstacles. Each level should have clearly defined jurisdictions and mission and at

the same time the logics of the whole system shall be defined, comprehensible and well known. This is not an easy task, it is not a process for one electoral term, but rather long-running inclusive progress implemented on the basis of preemptive measures, which, in the end, should be focuse don people and improving the quality of their lives.

All the presentations from the workshop as well as list of speakers are readily available on:

http://www.iefe.unibocconi.it/wps/wcm/connect/cdr/centro_iefeen/home/conferences/2014/convegno+20-21+ottobre+2014

This document is an output of the Centre of Excellence of Slovak Academy of Sciences (CoE SAS) as part of the 'Center of Strategical Analysis' (CESTA) project.

Acknowledgment

This contribution is the result of the project implementation: SPECTRA+ No. 26240120002 "Centre of Excellence for the Development of Settlement Infrastructure of Knowledge Economy" supported by the Research & Development Operational Programme funded by the ERDF

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Karasová Katarína

TACKLE YOUTH UNEMPLOYMENT USING GRADUATE PRACTICE IN SLOVAKIA

Introduction

Graduates after completion of studies start to look around for a suitable job position in which they could imagine their future career direction. For them it is difficult period of the search for the first work that can't be easy for the graduates without previous experience. Young people meet major problems with the first successful integration into the labor market. Graduates often remain unemployed, and this situation persists for several months or even years. If no action is taken to facilitate the transition from school to work, graduates come to a situation where a large part of them will not be able to successfully integrate into society and they will be excluded from it. Therefore, it is important to focus on employment policy to facilitate the transition from school to work. Employment policy can be defined as a set of tools and measures designed to promote employment, the efficient operation of labour market and the protection of workers. The main objective of employment policies is to provide opportunities to the unemployed for temporary employment, to create conditions for acquiring the required works experience, to help to maintain and improve the present qualification, to acquire new profession on the labour market, and to provide a temporary financial support for persons who lost their jobs. Legal relations in the provision of employment services in the Slovak Republic are governed by Act No. 5/2004 Coll. on employment services and on amendment of certain acts. This Act defines employment services "as the system of institutions and instruments providing support and assistance to participants of the labour market while seeking employment, changing employment, occupying vacancies, and implementing active labour market measures, with special regard to the vocational assertion of disadvantaged job seekers (Act No. 5/2004, §11)".

Youth unemployment

Unemployment is currently highly discussed issue in the Slovak Republic. It is a phenomenon that can cause long term negative impact on our future. Slovakia is among the countries with the highest youth unemployment in the European Union (figure 1). In 2014, the youth unemployment rate was 29.7 %.

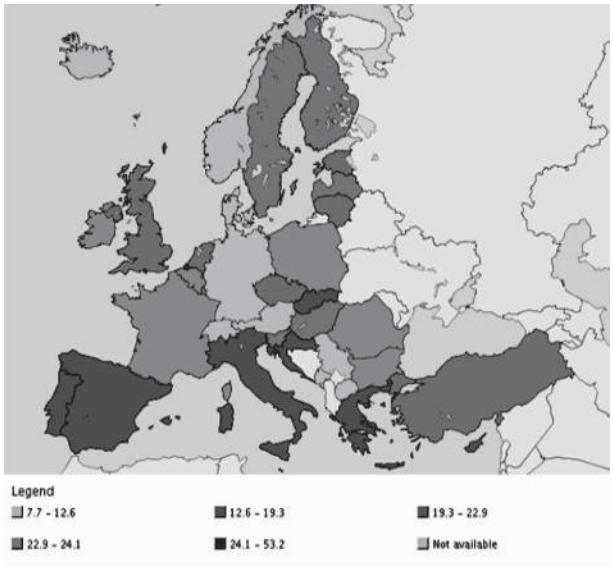


Figure 1: **The rate of youth unemployment, 2014**
Source: Eurostat

The country aims to reduce unemployment through the provision of a variety active labour market measures. The most widely used tool for the young people is graduate practice. Graduate practice is defined as the acquisition by the graduate of a school of professional skills and practical experience at an employer corresponding to the attained level of graduate's education in the respective group study branches or fields. (Act No. 5/2004, §51). The purpose of the graduate practice is to help graduates to get their first job with a regular income and thus to be included into the labor market. If the company is satisfied with a participant's graduate practice, it may offer him a permanent job. Graduate practice supports the entry of graduates into career with an emphasis on work experience and professional skills in a particular workplace. It gives young people the chance to build their career path. It is primarily aimed at increasing their employability at the labour market.

Effects of graduate practice in Slovakia

Since the graduate practice is paid from the state budget, it is very important to analyze its effectiveness and determine whether they reduce the youth unemployment. When analyzing the effectiveness of the contribution to graduate practice, we can determine whether the measure of the labor market is the stimulus for graduates or vice versa, contribution just pumped off funds from the budget. The expert team of the project of center of social dialogue

in KOZ dealt with the effectiveness of several interventions of the labor market. In this chapter we summarize the results obtained regarding the graduate practice in Slovakia.

Description of the data base

For analysis, we used individual data from the register of jobseekers provided by the Central Office of Labor, Social Affairs and Family in Slovakia. The basic set provides information on 898,269 persons who were registered with labor offices to 1.1.2011 or were registered in the years 2011, 2012 and till March 2013. Labor market interventions assessments were provided in 2011 (in the form in which they were in force at this period). Participants were then monitored from 1 January 2012 to 31 March 2013 (15 months).

Methodology for evaluating the effect of graduate practice

We used counterfactual evaluation to analyze the effectiveness of graduate practice. This methodology we used for the first time in the Slovak Republic for the evaluation of employment policy. The evaluation is based on the comparing indicators of successful employment of the job seekers who were to graduate practice (participants) with jobseekers, who did not attend the graduation practice (control group). Selection of the control group occurs after implementation of the measure (ex post). Pairing, we used a combination of exact selection based on the selected character (age group, gender, education, labor offices) and methods of propensity score matching (other observable characters reflected in one variable through modeling their impact on the probability of taking part in the action. The twins we have chosen with the method of the nearest neighbor. In the analysis, we monitored the proportion placed in the labor market. By comparing the proportion of participants in a control group, we found the net effect of the measures on the chances of employability of jobseekers:

$$E_{pp} = p_p - p_c$$

$$E_{pr} = \frac{p_p}{p_c} - 1$$

where

Epp the net effect of the measures expressed in percentage points

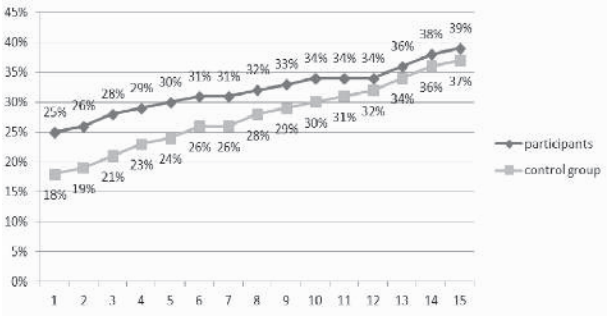
Epr the net effect of the measures expressed in the proportion of probability

pp probability of leaving from the database of jobseekers for participants

pc probability of leaving from the database of jobseekers for the control group

The results of the effectiveness of graduate practice in the Slovak Republic

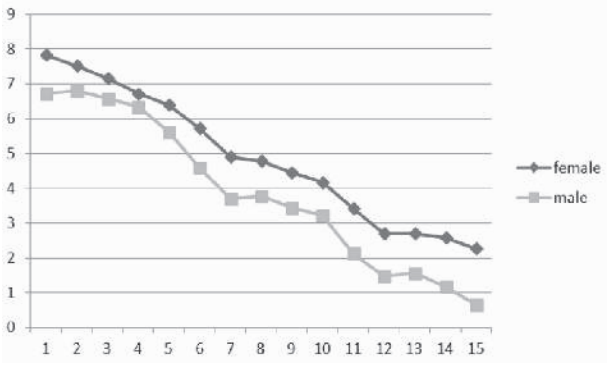
Graduate practice, see graph 1 and table 1, has an energizing effect on the graduate during the whole period. Participants at the graduate practice to a greater extent employ than jobseekers which are included in the control group. In the first reference period the probability of employment for participants of graduate practice is 24.94% and for jobseekers included in the control group is 17.51%. At the end of the reporting period, the difference between the probability diminishes (the effect is gradually disappearing) - participants with graduate practice are employed with a probability of 38.8% and the others, included in the control group, with a probability of 37.12%.



Graph 1: **Probability of leaving the database of jobseekers for participants and control group**

Source: Štefánik et al. (2014)

In analyzing the net effects of graduate practice by gender, there were not comparable significant differences (see graph 2). At the beginning of the reporting period, there is the difference between the net effects of only 1.12 percentage points. Men and women have the same probability to place in the labor market following receipt of the contribution. Probability of leaving from the database of jobseekers for participants and control group had approximately the same levels as can be seen for the whole population.



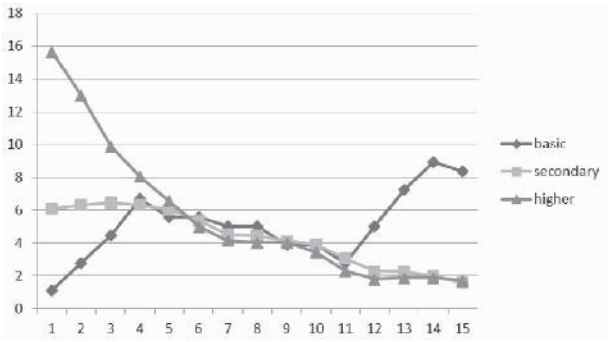
Graph 2: **The net effect of the measures expressed in percentage points (Epp) by gender**

Source: own processing, according to Štefánik et al. (2014)

t	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
E_{pp}	7,43	7,25	6,95	6,58	6,11	5,31	4,47	4,42	4,09	3,83	2,95	2,25	2,29	2,07	1,68
E_{pr}	0,42	0,38	0,33	0,29	0,25	0,21	0,17	0,16	0,14	0,13	0,1	0,07	0,07	0,06	0,05

Table 1: **The net effect of the measures**
Source: own processing, according to Štefánik et al. (2014)

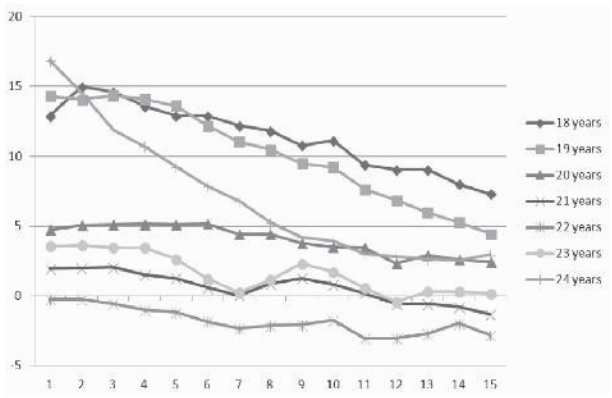
In Graph 3, we can see that the net effect of the measures at the beginning of the period for the unemployed with basic education is only 1.12 percentage points, for jobseekers with secondary education 6.09 percentage points and for the unemployed with higher education 15.67 percentage points. The net effect for the unemployed without education could not be calculated because of a small number of observations, respectively the results may be less reliable. We can say that the effect of the contribution on the graduate practice for the unemployed with attainment of basic education has positive effects only in the longer term and with time increases. Conversely, in the case of jobseekers with attainment of secondary and tertiary education, there is visible short-term effect of the measure which decreases in time.



Graph 3: **The net effect of the measures expressed in percentage points (Epp) by education**
Source: own processing, according to Štefánik et al. (2014)

In analyzing the net effects we did not analyze jobseekers who were of age 16, 17 and 25 years due to the small number of observations because the results would be unreliable. The greatest effect in the first observed period has graduate practice provided to jobseekers aged 24, 19 and 18 years (see graphe 4). There is minimum effect, respectively almost none, on the age groups of 21, 22 and 23. Even for some of the reference month, there is a negative effect. We can see that very important is the timely activation of graduates. The longer is graduate unemployment after graduation, the harder is seeking of the work.

The largest differences in efficiency are visible in regional analysis. In Table 5 there are shown net effects graduate practice in respective job in the first, sixth and twelfth reference month. The grey color indicates the negative effect of measures and white color positive effect. Visibly, there are very large differences in employment



Graph 4: **The net effect of the measures expressed in percentage points (Epp) by age**
Source: own processing, according to Štefánik et al. (2014)

offices that are nearby socio-economically or geographically. It should be noted that in offices, where is a small number of beneficiaries on graduate practice, the analysis results can be less reliable.

Conclusion

Graduate practice is a labor market measure, whose main objective is to reduce youth unemployment. The analysis showed that the graduate practice has positive effect on job applicants. Graduates who receive an allowance increase the chances to place in the labor market. Graduate practice thus gives young people the chance to build their career path. It is aimed primarily at increasing their employability in the labor market.

The analysis showed that the method of implementation plays a significant role in determining the net effects. Different ways of implementing contribute significantly to the observed large difference in net effects of the measures. Implementation of the labor offices is not uniform, which was also reflected in the large variability of net effects between employment offices. In order to increase the net effects of measures in individual regions would be appropriate to transfer information and experience regarding the implementation of the employment offices. It should do the monitoring and evaluation of net effects on a regular basis; they could identify successful and less successful offices in the implementation of the measures.

Labour Office	t = 1		t = 6		t = 12		number of recipients
	E_{pr}	E_{pp}	E_{pr}	E_{pp}	E_{pr}	E_{pp}	
Banská Bystrica	1,67	32,26	0,74	22,58	0,10	4,84	62
Banská Štiavnica	0,75	10,55	0,55	11,06	0,20	6,03	199
Bardejov	0,67	8,60	0,08	1,58	-0,02	-0,57	698
Bratislava	0,80	13,25	0,25	7,28	0,15	5,96	151
Brezno	0,00	0,00	0,00	0,00	0,00	0,00	6
Čadca	0,61	9,36	0,45	10,34	0,03	1,23	406
Dolný Kubín	0,30	6,52	0,20	5,43	0,11	4,35	92
Dunajská Streda	-0,16	-3,55	-0,06	-1,78	-0,05	-2,07	338
Galanta	0,12	3,08	0,26	6,92	0,13	5,38	130
Humenné	0,65	9,22	0,29	6,45	0,21	5,99	217
Kežmarok	1,06	12,15	0,60	10,42	0,23	6,60	288
Komárno	1,11	13,25	0,29	6,62	0,17	5,96	151
Košice	0,53	9,52	0,20	5,67	0,14	5,27	987
Levice	0,50	7,67	0,26	6,27	0,06	2,09	287
Liptovský Mikuláš	0,25	6,37	0,11	3,18	-0,11	-5,10	157
Lučenec	0,08	1,43	0,03	0,71	0,17	5,00	420
Malacky	0,67	13,04	0,13	4,35	0,22	8,70	46
Martin	0,47	9,33	0,07	2,33	-0,12	-5,67	300
Michalovce	0,00	0,00	-0,50	-12,50	-0,25	-8,33	24
Námestovo	0,06	1,18	0,27	7,65	0,30	11,18	170
Nitra	0,15	2,58	0,20	5,15	0,01	0,52	194
Nové Mesto nad Váhom	0,71	15,63	0,16	6,25	0,11	5,63	160
Nové Zámky	0,81	11,56	0,37	8,41	0,04	1,58	571
Partizánske	0,27	6,30	0,13	3,70	0,14	5,56	270
Pezinok	-0,40	-12,50	0,11	4,17	0,20	8,33	48
Piešťany	0,41	10,27	-0,01	-0,54	-0,07	-3,78	185
Poprad	1,00	12,53	0,57	11,14	0,06	2,23	359
Považská Bystrica	-0,25	-6,49	-0,11	-3,90	-0,11	-5,19	154
Prešov	0,19	3,12	0,35	7,27	0,04	1,56	385
Prievidza	0,42	9,12	0,20	6,20	-0,05	-2,19	274
Revúca	0,26	3,55	0,08	1,77	-0,06	-1,77	282
Rimavská Sobota	0,97	10,16	0,52	8,57	0,17	5,08	315
Rožňava	0,67	9,52	0,33	7,36	0,01	0,43	231
Ružomberok	0,55	8,76	0,21	5,15	0,18	6,19	194
Senica	0,40	10,00	0,18	6,55	0,03	1,38	290
Spišská Nová Ves	0,59	8,92	0,36	8,62	0,20	6,46	325
Stará Ľubovňa	0,11	2,70	-0,02	-0,68	-0,19	-7,43	148
Stropkov	0,47	7,57	0,52	9,19	0,20	4,86	185
Topoľčany	0,40	7,33	0,42	9,91	0,09	3,02	232
Trebišov	0,19	3,22	0,26	5,98	0,13	4,60	435
Trenčín	0,24	5,20	0,18	5,81	0,03	1,53	327

Table 4: **The net effect of the measures by labour office**
Source: own processing, Štefánik et al. (2014)

Acknowledgements

The contribution is the result of VEGA Project No. 2/0117/15 "Variations of corporatism and its impact on economic outcomes and outputs in Central and Eastern Europe".

This contribution is the result of the project implementation: SPECTRA+ No. 26240120002 "Centre of Excellence for the Development of Settlement Infrastructure of Knowledge Economy" supported by the Research & Development Operational Programme funded by the ERDF

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Martina Lazarová

NEW WATER CULTURE UNDER FUZZINESS

Introduction

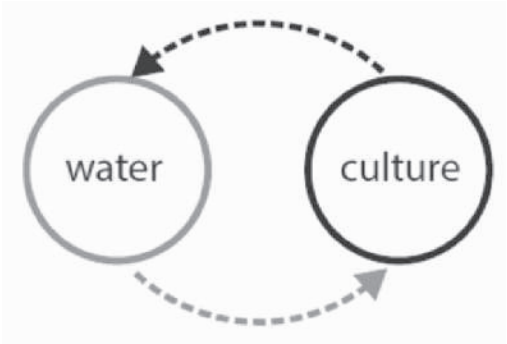

Figure 1: **Water shapes culture and culture shapes water**
Resource: Author

Historically nobody has doubt about the importance of water as essential lifeblood for every civilization. Most settlements were founded to take advantage of and to be in harmony with the water element. Some of these were even built on water, whether in the river, lake or in the sea. Water has become crucial for shaping human cultures, and vice-versa (Figure 1). Thus this relationship is mutual, on the one way, water forms the "capital" of the area through its cultural significance or religious values. The example can be found in the first irrigation-based societies with ingenious water management structures as for example China, India, Mesopotamia or ancient Rome. These examples shows that water carries humanity's collective memory of management practice. A key challenge for current water management is therefore to reclaim the proven solutions of the past, though another context, to present day (Cabrera, 2010). And this is not an easy task. On the other hand, through-out history, a cultural stewardship relation towards water was crucial for the sustainability of the water resources. Especially in the urban context this becomes even more obvious, as the higher urbanization puts higher pressure on local water resources (Nilsson, 2006). Within this view our cultural trails shape both conflict and consensus in understanding, valuing, using, and managing water. In summary, it is our values, faiths, and ethic that ultimately drive our management solutions (Priscsoti, 2012).

The research focuses on the idea that the language of current urban water management is full of fussiness what address different forms of uncertainties within the city territory (Pahl-Wostl, 2002, Pearson et at., 2010, Brown et al., 2001). Therefore the importance of water resilience and its cultural adaptation has become a major issue of discussion. Until just a few decades ago, the changes of water culture have caused a number of problems. Nowadays, concerns have been raised that traditional water management is wrongly adapted to challenges associated with climate change, population growth, ecological and social imbalances. Much of the call to action has been, understandably, dominated by fear and pessimism: for example, fear of destroying the ecology or fear of social conflicts. (Priscoli, 1999, Pahl-Wostl, 2002, Pearson et at., 2010, Brown et al., 2011) The core concepts utilized in this paper draw upon the traditional knowledge, stewardship and time-tested management solutions, which can help to meet the complex needs of a changing environment. The aspiration for change has been tagged in variety of way, but in this paper is referred to the concept of "water resilience". The research is motivated by the core research question: How can cultural diversity and social learning contribute to future urban water resilience? Although extensive academic research has explored the shifting from posting simple system to using more complex frameworks to understand the diversity of water resilience´s puzzles (Rockström, J. Falkenmark, M. Allan, M., Folke, C. Gordon, L. Jägerskog, A. Kummu, M., 2014 (Folke, C. Carpenter, S.R. Walker, B. Scheffer, M. Chapin, T. Rockström, J., 2010), a little attention has been given to the attribute of cultural diversity and social learning in the concept of water resilience (Cabrera, 2010).

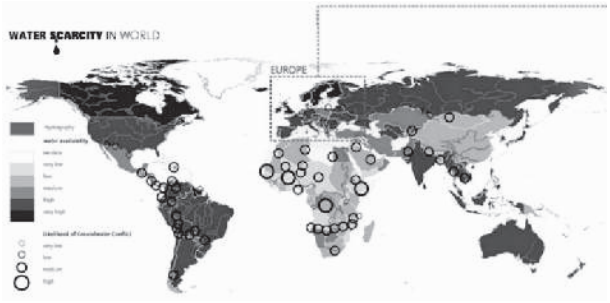

Figure 2: **World water availability and water scarcity in the EÚ, Likelihood of water conflicts**
Resource:
2. A) University Corporation for Atmospheric Research. 2014
2. B) The institute of Internal and European Affairs, 2011

LITERATURE REVIEW: WATER RESILIENCE

According to United Nations predictions, by 2025, 1.8 billion people will be living in countries or regions with absolute water scarcity, and two-thirds of the world's population could be living under water stressed conditions (Arup, 2011). It is because, in many cities all over the world, current water is poorly managed and water policies are simple unsustainable. Great historian Edward Gibon, while

walking around Rome´s ruins, wondered how such an impressive culture had fallen so low. The answer can be found in his statement that what does not evolve, is decadent. For this reason the challenge that the present-day society has to face is to match up to its ancestors: to give the adequate response to the moment in which that society is living (Cabrera, 2010).

Despite the recent hype in the literature around resilience, agreement on key aspects of the concept of water resilience is still missing. Resilience in general has been variously defined and its conceptualization in recent years has been called "fuzzy and contested". It shares similarities with sustainable development in that it is frequently used as an umbrella concept to describe a broad array of in terrelated issues (Dovers, Handmer, 1996). The concept of general resilience has occurred in modern times primarily through the work of Canadian ecologist C.S. Holling in1973, who defined resilience as persistence of a system through change. Since then, the term started to run through almost all the disciplines and languages concerning individuals and institutions, as well as cities and territories. Its multidisciplinary and its adaptability within dynamic systems and complexity theories make the concept more and more attractive (Garschagen, 2011). Now, over 40 years later, the CMAs (Catchment Management Authorities, 2012) sustains that resilience consists of two related aspects;

- general resilience - the resilience of the system as a whole to any and all kinds of disturbances.
- specified resilience - the resilience 'of what, to what', which calls for identifying particular limits in the system, beyond which it begins to function in a different kind of way, impacting on the quality of ecosystem services (Catchment Management Authorities, 2012)
- water resilience - sets an ambitious goal by tackling the world's key resource in the spotlight of global change
  - school of water landscape
  - school of water engineering

According to CMA, we distinguish between general and specific resilience in relation to water management, because this provides an important conceptual differences in our understanding. The general resilience is defined as resilience of an entire system to all kind of shocks. On the other hand, specific resilience is described as the ability of a particular part of the system related to specific control variable, to cope with disturbances. Specific resilience is possible to quantify and analytical explore, while general resilience is more complex and often impossible to measure analytically. Following Rockström et. al (2014), water play a fundamental role in supporting both specific and general resilience. Therefore, in order to usefully define resilience of water sector it is necessary to look at its origins and the current academic uses of the term "water resilience". The foundation for this research was to compare the perspective of water landscape with perspective of water engineering, and to find out general definition for their possible interrelationships in the context of spatial planning.

A BRIEF HISTORICAL PERSPECTIVE OF WATER RESILIENCE

In the recent years, researchers have developed the concept of water resilience; however, it is not fully new. For the purpose of this paper we have reviewed some of the past literature, in order to determine the evolution of water resilience-based concept and simultaneously to outline new perspective of the concept based on cultural diversity (Figure 3). The historical roots of the concept reached the early 1990s. Before this period the management focus were on blue water as fully fragmented and sectorial approach to water resources that has led to poor services and unsustainable resource use (Bartone et al., 1994, GWP, 2010). After that, in response to the deepening understanding of water's fundamental roles in the life-support systems of our planet, water resource thinking has broadened from blue water only to integrated blue-green approach (also known as green water concept) (Fiorino, 2001). Put another way, as Scheffer et al., (2001) stated in his definition, "the ecosystem processes modify the hydrological cycle and the hydrological cycle affect ecosystem processes. These mutual interactions affect the ability to buffer stress and shocks." Both traditional concepts were followed by a more systems-oriented approach of integrated land and water resources management in the early 2000s. During that time the attention was focused on the new situation, in which abrupt, large-scale changes in the hydrological cycles can no longer be overlooked (Rockstrom et al. 2014). However, over the last 15 years, the definition of water resilience appeared and evolved. The core of mainstream thinking has become the idea that water resilience refers to the ability to deal with change while continuing to develop (Folke et al., 2010).

Synthesizing the evolution of the water resilience-based concept, the need for a new focus on water management has recently been recognized by science community (Montanari, 2013; Cabrera, 2010). This implies a deeper insight into fundamental role played by culture in water management practice. Drawing on the huge uncertainties concerning the water hazard, it is needed to build on local knowledge, historical experience and cultural diversity. Therefore, this study brings together a set of unsettled water-culture related challenges.

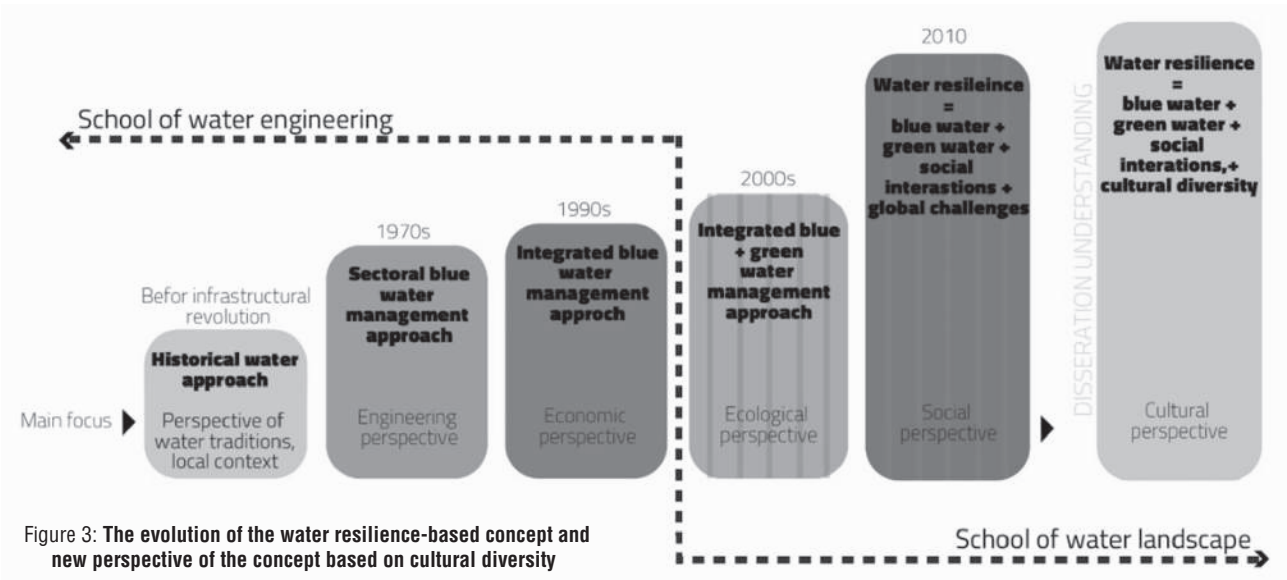

Figure 3: **The evolution of the water resilience-based concept and new perspective of the concept based on cultural diversity**

Resource: *Author according to (Rockström et al, 2014)*

THE MEANING OF WATER RESILIENCE

Although the idea of water resilience is a bit messy in and by itself, in this paper two conflicting schools offer explanations of water resilience. Even Canadian theoretical ecologist, C.S. Holling (1973), who firstly developed the general concept of resilience, made a distinction between engineering and ecological resilience. On the one hand, water engineering school defines resilience as "the ability to return to an equilibrium or steady-state after disturbances. The effectiveness of a resilient infrastructure then depends upon its ability to predict, absorb, adapt to, and rapidly recover from a potentially disruptive event such as droughts and floods" (Holling, 1986, Wallace et al. 2010). In the light of this definition, water resilience is mostly about delivering services regardless of disruptive events that may occur – the ability to 'take a licking and keep on ticking' (to quote the old Timex slogan). Here, water resilience is mostly defined according to how long it takes for the system to recover after a shock. The emphasis is on return time, "efficiency, constancy and predictability", all of which are preferred qualities for a "fail-safe" engineering design (Holling, 1996, p. 31). In practical terms, this technical understanding of resilient water management is rooted in most of the current water management practices.

At the other hand, the second school of water landscape considers water system as more than the sum of their engineered parts. They can be described as socio-ecological systems, as they require complex interactions between human, technological and environmental components. In this perspective, ecological resilience is more complex and has very broad implications (Folke et al. 2010). School of water landscape defined water resilience as the magnitude of the disturbance that can be absorbed before the system changes its structure (Holling, 1996).

Therefore, it is focused on the ability to persist and the ability to adapt within critical thresholds (Adger, 2003, p. 1). The main difference between these two schools is that ecological resilience rejects the existence of a stable equilibrium and requires a mind shift in water thinking (Rockstrom et al., 2014).

To sum up, the literature review indicates that the water resilience is another intuitively appealing buzzword. However, it is worth questioning whether 'water resilience' has simply joined the long list of intuitively appealing yet unclear concepts (such as resilience and sustainability). It's certainly no easy to define, or specify what a resilient water system might look like. Following Folke et al. (2010) and Rockstrom et al. (2014) for the purpose of this research water resilience is defined as, the complex, multi-dimensional system that is not at equilibrium. It periodically or constantly changes and adjusts. The key is to shift away from yesterday's focus on how to reduce environmental impacts of human activities, towards reconnecting economic, ecological, social as well as cultural attributes. Simply put, the research is motivated by question: Are two different approaches of water landscape and water engineering mutually exclusive? The paper considers them to be complementary and both useful at different territories and different scales.

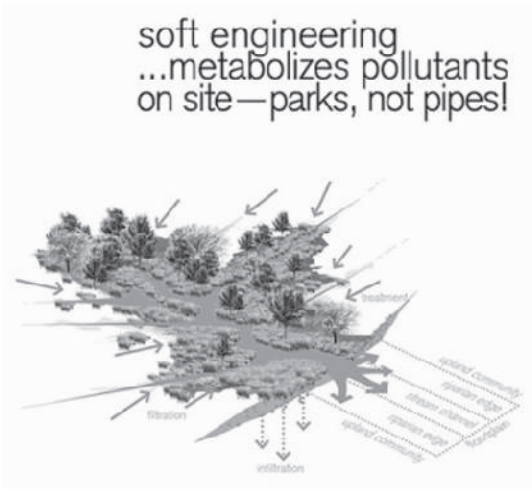

Figure 4A: **An example of water landscape perspective:**

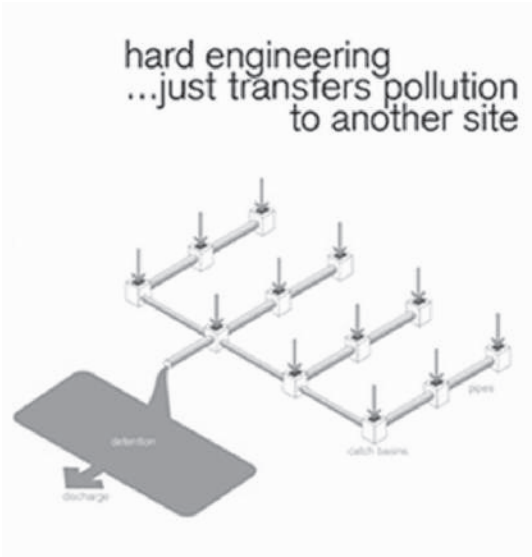

Figure 4B: **An example of water engineering perspective**
Resource: University of Arcansas, Community Design Centre, 2011

SHYNTEHSIS: BUILDING WATER RESILIENCE

Based on the aforementioned theoretical discussion in literature review, the paper defines the concept of water resilience. The focus of the paper is to study the adaptability of water systems and to meet the new challenges in navigating ecosystem dynamics without compromising long-term sustainability. Through this chapter, we argue that:

- H1: Water resilience is combination of water landscape perspective and water engineering perspective
- H2: Water resilience is built on local knowledge and cultural diversity.

Here, we outline combined nature/engineering perspective, with emphasis on cultural diversity and local knowledge. The challenge is to anticipate change and shape it for resilience in a manner that does not lead to loss of future option. In this chapter we explore the above hypotheses and present some provisional conclusions on resilient water cycles. Currently, we are living in period of constant changes. Such periods caused by disturbances or crisis are the most neglected and the least understood in conventional water management practice. This implies a shift in water management towards those institutions and organizations that can deal with nature´s dynamics in a fashion that build not only ecological or social but also cultural resilience of water resources. Otherwise, the development and well-being of human societies will become increasingly vulnerable to environmental changes.

CONCLUSION

Water is one of the most pressing development challenges of our time. Water management model built on the paradigm of “engineering expertise” has been dominating the water management community for decades. Such perspective requires system behavior as highly predictable. The failure to implement water resilient systems may be due less cultural-based expertise. A better understanding of cultural values and water management traditions is essential to catalyze change for integrated and adaptive water management regimes. This new approach requires knowledge of the system in its full complexity and calls for a shift to strategies that can deal with high uncertainty. As history has shown, this can result in problematic decisions, such as high operational costs and lock-in effects. Therefore, collaborative practices develop a shared construction of reality through the understanding of local contexts from the perspective of the involved parties in order to derive knowledge informed by context and suitable solutions. However, doing so is not easy. Paper´s contributions emphasize the role that local knowledge and underlines the physical manifestations of the water/culture relationship in the concept of water resilience. Local leadership will be vital in addressing the challenges in the decades to come.

Acknowledgment

This contribution is the result of the project implementation: SPECTRA+ No. 26240120002 "Centre of Excellence for the Development of Settlement Infrastructure of Knowledge Economy" supported by the Research & Development Operational Programme funded by the ERDF

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POSSIBILITIES OF USING DEMOGRAPHIC DATA IN SPATIAL PLANNING

Introduction

Development processes of settlement systems are conditioned by a large number of different factors. Among all, the demographic processes are the most influential. As the population and its needs change, the rate, structure and quality of urbanization change too. Consequently, appropriate conditions for living and working as well as leisure activities can positively influence the population in the locality.

The variety of influences, which determine processes of the development the settlement, requires a creative interdisciplinary cooperation and independent scientific discipline that will coordinate their interaction.

"Urbanism is understood as a methodological and theoretical base of spatial planning including wide issues of humanistic, natural and technical sciences. It operates at the intersection of these three main scientific branches. ... Defining the principles, conditions and rules of guiding the development of settlement systems in the direction of sustainability is not possible without knowing the factors, the nature, cause of the formation and development processes of synergic quality of the human environment. This becomes the main task of contemporary urban science in theoretical as well as practical aspects."[Finka].

In order to make the right decisions by competent authorities represented by the experts, laws must be based on in-depth knowledge of the issues supported by scientific arguments. Every scientific discipline brings its own view on the issue, but nowadays every scientist must be open to cooperation with all relevant fields.

"Information about population processes and structures are essential in all planning and management activities. Location of all economic activities is based on the number, age and qualification of the workforce. .... Social policy takes into account, among other things, processes of aging the population." [Mládek]

Demographic data, which are constantly updated and are available to the public via the Statistical Office of the SR, are extremely important in planning processes. However, working with this extensive database can be challenging for users who normally do not work with demographic data or who only need a prompt view and orientation in demographic processes. In this case, the Demographic atlas of the Slovak Republic can be a great help. It provides a spatiotemporal study of demographic processes which were professionally processed and are represented by graphs and maps.

The Demographic Atlas of the Slovak Republic

In early 2015 a new Demographic atlas of the Slovak Republic was published. It was a result of cooperation of the Demographic Research Centre of the Institute of Informatics and Statistics Bratislava and the Department of Human Geography and demography at the Faculty of Natural Sciences, Comenius University in Bratislava.

The Demographic atlas of the Slovak Republic follows the Atlas of the Slovak population published in 2006. Rapid development of demographic changes in the last period accelerates demographic research too. Decrease and aging of population in Slovakia as well as migration are common topics of public and political debates. Demographic changes are in terms of economic development adverse and irreversible. This fact increases the demand on the acquisition of updated demographic data and their processing by experts. Results of this process are high-quality forecasting perspectives and must be taken into account by every responsible citizen, scientist, economist or politician at all levels, from the village to international regions. The whole demographic atlas is processed in Slovak and English version.

Since 2006 the demographic development has changed several times were added also results of the 2011 Population and Housing census. Demographic atlas provides not only the actual data but also new methods of the demographic research. It brings very detailed analyses of the recent two decades of demographic processes and uses the method of temporal comparison of three successive population censuses (1991, 2001 and 2011), to map the whole period of the independent Slovak Republic after former Czechoslovakia´s dissolution in 1993.

The methodology of processing demographic databases in the Demographic atlas of the Slovak Republic

Demographic data are processed at the level of „8 territorial units-regions (the so-called Upper-Tier Territorial Units), having self-governing competences. Their territories are equal to NUTS-III units in the official EU nomenclature. The 79 districts are considered as official statistical units equal to Nuts-IV level. In the Demographic Atlas, these units were pivotal for spatial analyses. The map insets are used to zoom in on 5 urban districts of Bratislava

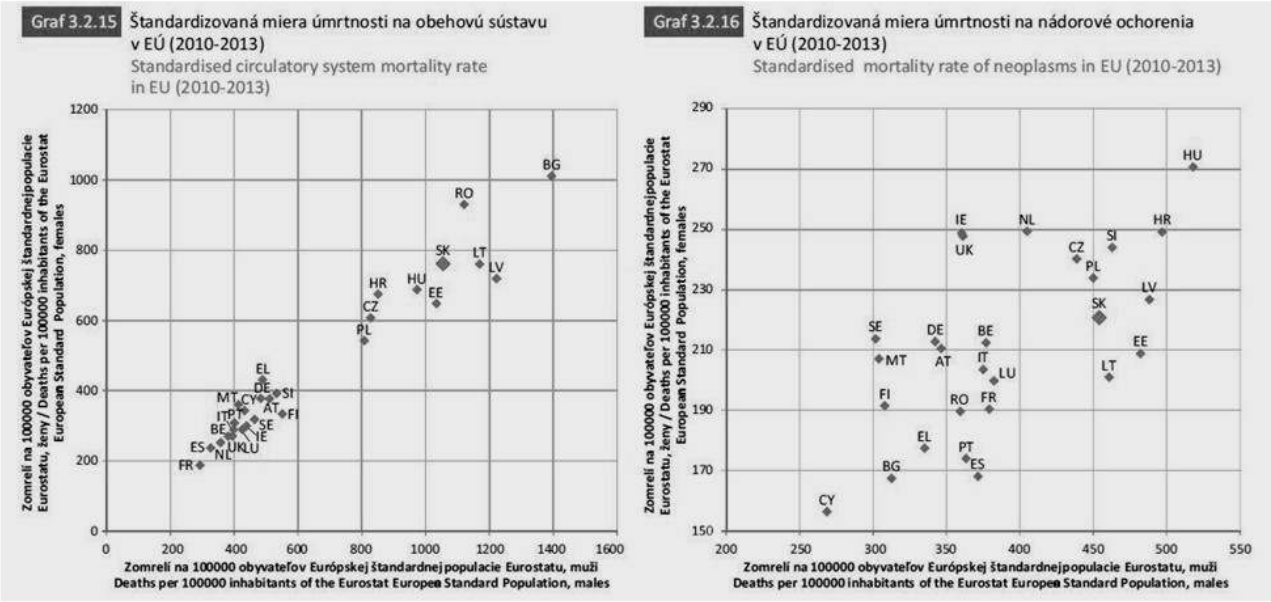


Fig.1: **Standardized circulatory system mortality rate in EU** (2010-2013)

and 4 urban districts of Košice in larger map scales. These are the only urban districts in Slovakia. As of the decisive moment of the 2011 census, the Slovak Republic was divided into 2890 municipalities. These represent the elementary self-governing territorial units corresponding to LAU-2.The data displayed in all maps are explained in the map legends." [BLEHA, B., Vaňo, B., BAČÍK, V. et al.]

Each chapter includes demographic terms and explanations in both languages. It allows an easy work with quite difficult statistical data for the user who does not normally work with demographic terms. Demographic data are well-organized and very comprehensively shown in color maps and graphs at 163 pages.

A brief content of the Demographic atlas of the Slovak Republic

1. Methodology
2. Population size, growth and distribution
3. Reproductive behavior (Fertility, Mortality, Abortion)
4. Family behavior (Nuptiality, Divorce)
5. Migration (Internal, international)
6. Population structures (Age and sex, Marital status, Nationality, Religiosity, Education, Households)
7. Population development in forecasting perspective

Example

As an example we have chosen two graphs and one map from Chapter 3. Reproduction of the population with the mortality issue.

The mortality has an important role in the formation of the size of the population. An important aspect in assessing the mortality is cause of death. The most common causes of death in the SR are due to circulatory system diseases and neoplasms. The following charts provide a comparison of the situation in the Slovak Republic with other countries of the EU. One can see that Slovakia is one of the countries with the highest mortality from circulatory system diseases in the EU.

There is also an interesting view on the avoidable mortality. It is calculated from deaths that can be treated or prevented by various steps. The following map provides a quick overview of the development of this mortality in three time periods and comparison in districts.

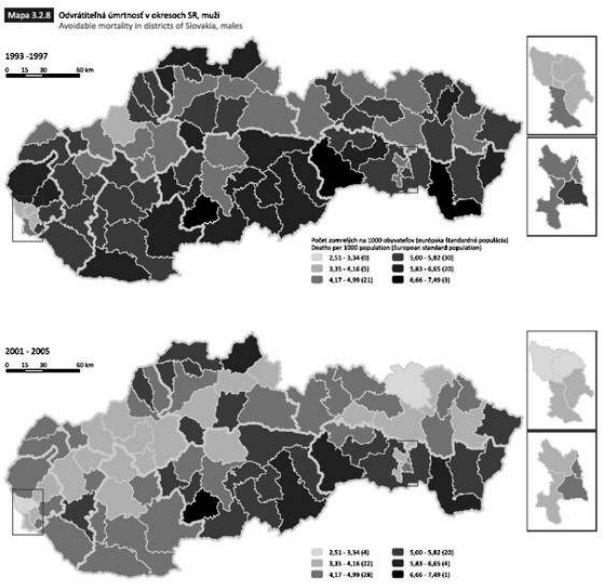
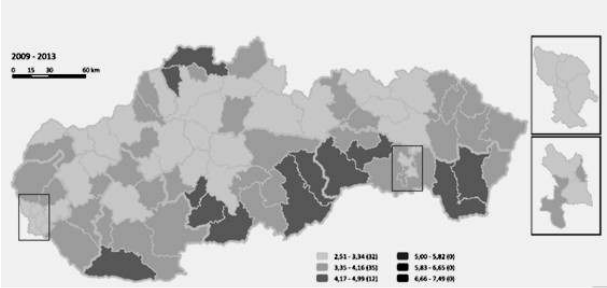


Fig.2: **Avoidable mortality in districts of Slovakia, men.**



Conclusion

Spatial planning with demographic development of the chosen area creates communicating vessels. Spatial planning based on high-quality demographic prognosis can backwards positively influence demographic behaviour of the population. This aspect is highly topical in terms of current unfavourable demographic development of the Slovak Republic. The demographic atlas of the Slovak Republic is a wide source of relevant information about demographic processes. Coverage of processed database provides selection according to user's intentions, and also a comprehensive view on demographic processes and their causes. This view is together with detailed processing the most valuable benefit of the Demographic atlas of the Slovak Republic.

Acknowledgment

Acknowledgment: This contribution is the result of the project implementation: SPECTRA+ No. 26240120002 "Centre of Excellence for the Development of Settlement Infrastructure of Knowledge Economy" supported by the Research & Development Operational Programme funded by the ERDF

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*MLÁDEK, J.*et. al. **Demografická analýza Slovenska.** Bratislava: Univerzita Komenského v Bratislave, 2006. ISBN 80-223-2191-5

Useful links:

http://www.infostat.sk/vdc/en/ (see „Demographic data")

www.infostat.sk/slovakpopin (It includes mortality characteristics of SR as a whole)

www.statistics.sk

Petríková Dagmar
Szuhová Jana

URBAN GARDENING ON BROWNFIELDS TO FOSTER COMMUNITY PLACES

Introduction

Community gardening became a popular leisure time activity in the cities around the world. Participation in urban community gardening gives participants a full-fledged alternative experience in food production, even with limited time and space conditions. American Community Gardening Association defines community gardens as any piece of land, which is collectively gardened by a group of people. According to various studies and researches, community gardening provides not only experience in food production, but has also numerous positive health, social and environmental effects. Potentially, community gardening could also affect the way communities think and perceive food, environment and health (Frumkin 2005, Conradson 2005, Hale et al. 2011). As Michael Pollan argues, food production of the 21st century must change. Technologies such as food preservation, transportation and arching over seasonal and regional food production modified the relationship between food, culture and society (Pollan 2011).

Community gardens are often viewed as one of the strategies, which may improve sustainability of urban environment as well as improve health and affect lifestyle of individuals. More than half of world´s populations lives in cities, which opens up a new perspective, particularly on involving society – communities, on food production in urbanized areas. Andres Duany´s concept of agrarian urbanism is one of the most beneficial methods to develop and dwell on land. Rather than agricultural, agrarian urbanism involves society into food production and processing (Duany, 2011).

This paper aims to discuss the possibility of implementation of larger-scale community gardening in the capital of Slovakia, Bratislava, with perspective of future transformation towards agrarian urbanism. Bratislava has different relicted areas, underused buildings, unused land or building gaps, which are potentially suitable for implementation of such strategy. These may become a component of urban food system in the form of community gardens.

Health and social aspects of community gardening

Social cohesion and informal social control are two major preconditions of collective efficacy. The result of solidarity, mutual trust between community members leads to the environment, where individuals are able to take action and follow the same goals together. (Sampson, et.al., 1997; Teig et al. 2009; Jacobs, 1961) We assume that community gardening may play significant community-defining role, if supported and applied widely in cities. Community gardens support social inclusion and positive social and psychological effects, which lead to healthier society (Hale et al. 2011). Moreover, community garden researches show increase of collective efficacy, neighbourhood attachment, strengthened sense of safety. They also foster environmental knowledge, connect people and create emotional connections to the garden. At the local level, community gardens and the gardener experience provides a great opportunity to connect sustainable and productive landscape within the urban food environment (Hale et al. 2011; Teig et al. 2009).

Community gardens support local sustainability of cities and improve health of their residents. Apart from their race, age, ethnicity, social status or income, gardening supports diversity within local communities and also within greater national, or multinational movement of community gardeners. This social movement is a part of sustainable food production, which reaches also to people outside this community. Community gardeners also influence local and national policies, mainly in supporting healthy and active lifestyle and use of vacant spaces (Teig et al. 2009; Hyens, 1996; Armstrong 2000). Healthy and sustainable landscapes, to which belong also community gardens, constitute of the relationship between physical and social structures. Biological and environmental factors are meant by physical structures as well as manmade objects are meant by social structures, e.g. political, economic or cultural factors. Connecting food, environments and health through emotional, spiritual and value-driven experience is a challenge for designing places that connect individuals and shape communities (Cummins, et al. 2007; Hale et al. 2011). For planning and supporting sustainable cities it could be crucial to plan urban gardens for community activities based on these experiences.

Donna Armstrong´s survey of 63 community gardens grouped under twenty community garden programs in upstate New York resulted in the description of numerous benefits of gardening:

- Improved social connections, raising awareness and activity of local policy
- Interactions between gardeners´ groups through different programs
- Identification of children with cultivated land
- Participation also of lower income households
- Stronger community cohesion – recognition of people on the streets

- Higher knowledge about local actors – easier action initiation process
- Social control of the neighbourhood
- Landscaping attempts not only on the community garden
- Establishment of neighbourhood organizations
- Establishment and maintenance of parks and playgrounds (Armstrong 2000)

Figure 1: **Community garden Karlsplazt, Vienna**
Source: author

Urban and environmental aspects of community gardening

Community gardens are usually defined as any piece of land gardened by a group of people in different locations. Community gardens are very flexible and adaptable to different conditions. From spatial planning point of view community gardens can be classified by different criteria, such as location, area, connection to public/ private objects, ownership, and type of production:

- Location: urban, suburban, rural settlement
- Area: individual plots, mid-sized communal plot, large plot for urban agriculture
- Connection to objects: kindergartens, schools, hospitals, community centres, churches etc.
- Access: opened, semi-public, semi-private, private
- Ownership: public, private, unknown
- Type of production: ecological, permaculture, limited use of chemical fertilizers
- Production for: individual consumption, community, youth, local farmers´ market
- Support received: city, community budget, none etc.

(Kaplan, et al. 2005)

Community gardens often create an environmentally sustainable alternative to the conventional rural agriculture. Gardeners grow flowers, fruits, vegetables and herbs to connect back to the nature and enjoy gardening as relaxing leisure-time activity (Kaplan, et al. 2005; Teig et al. 2009).

Figure 2: **Ecological community Noaín, Pamplona, Spain**
Source: author

Challenges and perspectives of community gardening in Slovakia

According to Michel Pollan, it is necessary for our food production process to change, and this change should be made by our communities. Gardening communities might become an important part of the shift towards sustainable local food production.

Local food conditions are strongly affected by the way food is produced, transported to the shops/markets and finally distributed to the consumers. Community gardens may serve as one such landscape and are especially relevant in urban settings where residents, especially children, often lack experience with the fundamental processes associated with growing food (local farms, gardens). They are also connected with the lack of opportunities to purchase food from alternative, healthier and more personal, sustainable sources (farmers' markets, community-supported agriculture, small-scale grocery venues, food cooperatives) (Brown et al. 2000).

Challenges and perspectives in Slovakia:

- Limited research done yet (mapping of vacant spaces)
- Number of vacant/ unused plots in cities
- Brownfields as potential space
- First successful examples: community garden Sasinkova, Bratislava – Old Town (that has already been closed and new community garden in Karpatská str., Bratislava – Nové Mesto will be established, community vine yard and garden Pionierska, Bratislava – Nové Mesto, community garden Bratislava – Rača that is supported by local council and Pod Pyramidou Bratislava – Old Town

- Missing complex strategy for public spaces and legal support
- Missing support instruments for attracting gardeners (passportisation of available plots, clear rules)
- Promotion for land owners – usual fear of something new (gardeners will "stay forever", fear of plot degradation, administrational difficulties…)
- Transition of our cities
- And many others.

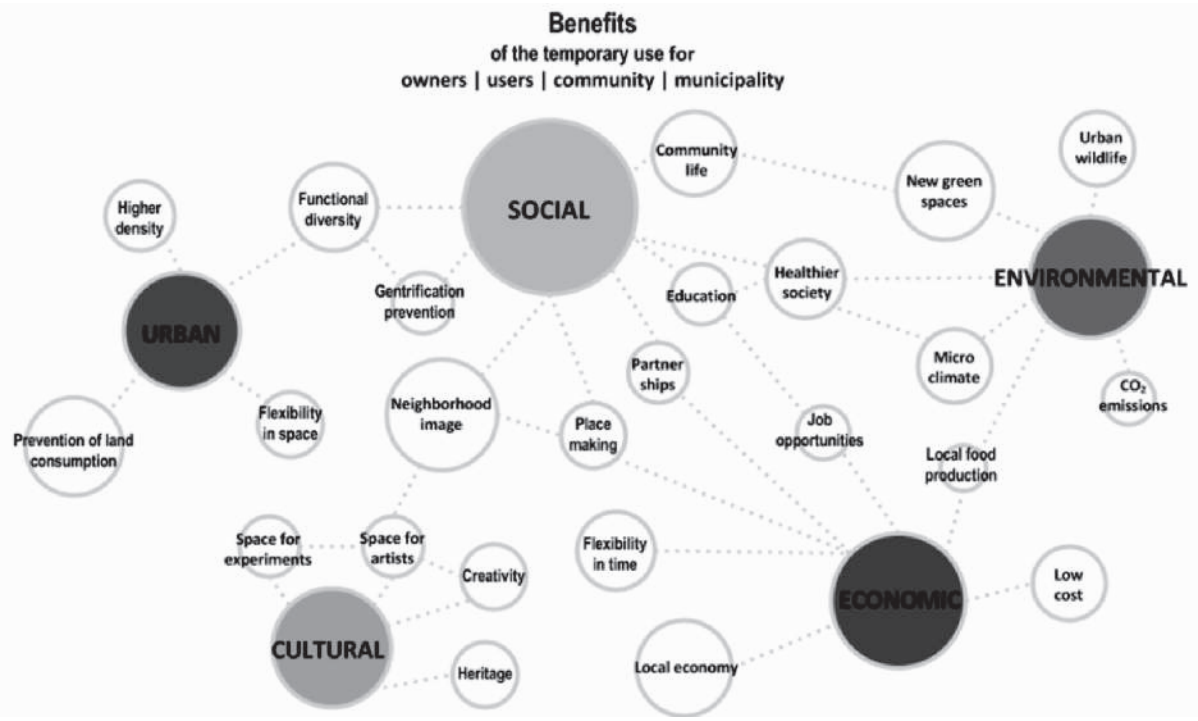
Use of reserve status approach in urban gardening

There is a growing number of activities to promote sustainable urban development and the adoption of several documents and declarations in support of effective strategies that address the development of the urban environment towards meeting its quality for urban population. One of the approaches is the focus on ecosystem services that is part of the Strategy of adaptation to the adverse effects of climate changes in cities. Bratislava as the capital of Slovakia has adopted such a strategy in 2015 and within that context supports creating community gardens on available plots of underused land or brownfields, with environmental and social benefits for the city. Community gardens are often viewed as one of the strategies, which may improve sustainability of urban environment as well as improve health and affect lifestyle of individuals.

Brownfields are and always will be degraded parts of cities, with the urge need of intervention. Brownfield regeneration could be the future for avoiding urban sprawl, overbuilding of land, increase of the economy and social life of the Slovak neighbourhoods. Abandoned brownfields stigmatize their neighbourhoods with different negative effects, however, temporary or "interim" land use bridges the period of brownfield standing idle and revitalized property. The concept of temporary use projects proposes immediate, usually low-cost and community-oriented intervention to bring economic, environmental, cultural, social or other positives to the neighbourhoods.

Temporary projects, which take advantage of the time between a property's former function and its intended long-term follow-up use, are becoming increasingly attractive. "Temporary use describes the interim stage when a site´s original purpose has been abandoned, its future development is still uncertain, and it can be used on favourable terms." (Lange, et al., 2007 p. 36.) When examining the "reserve status" approach no final or binding decision is made regarding the future use of a site. It is perceived that the transition of a site from abandoned or derelict status to a reserve status can be realized fairly quickly, especially for sites already publicly- owned, and this approach can also be a cost-effective strategy.

There is, therefore, a need to explore specific planning and technical approaches for transferring brownfields from an unutilized form to a reserve status. Options of this nature can be developed and implemented by affected regions and municipalities as part of their spatial planning responsibilities. The brownfield sites which could be definitively excluded from further developments for technical reasons, market conditions or planning goals



Source: author

could be reclaimed for soft end-uses as a way of managing the potential social costs of doing nothing. However, most of these sites will require long-term maintenance. Therefore, any short-term treatment will need to be linked to a maintenance strategy that will be managed by the public sector. Sites with a future prospect of redevelopment could be transferred into reserve status. A number of initial planning, technical and financial concepts have been tested in different European regions. The main goal of any reserve status redevelopment should be the limitation of treatment costs in the first step of remediation, demolition and interim landscaping.

A significant proportion of brownfield land, specifically in the areas with low market values, is not commercially viable to be brought back into beneficial use. These sites can be risky to public safety or health. Without some form of public intervention these sites will remain unused and potentially dangerous for the foreseeable future. The consequence is the blight on the surrounding areas and communities, and the loss of an opportunity to renew the area and the community in a sustainable manner. "While brownfield development may take a number of years in total to achieve, temporary land uses can be proposed and initiated on-site in the short term…

This allows vacant brownfield land to have productive uses for the earlier years of a long- term project, rather than standing idle." (Hollander, et al., 2010 p. 55.) It must not be necessarily the entire object used for short time activities, if the brownfield is too large, dimensions of used space can be completely customized to the type of temporary use. It is usually inacceptable to let the temporary use become permanent. There should be a vision for the final state of derelict land and the goals to reach it in the future or at least all possible uses should be considered. "They adapt well to the environment at hand and exploit its resources to the full. Minimal costs and the opportunity of taking space they can redesign under their own stream are more important than an expensively equipped stuff." (Lange, et al., 2007 p. 36.).

Cities are often challenged with dropping number of inhabitants, aging population and other demographical and social problems, so the current urban structure is not necessarily needed in this form anymore. All the properties, which are hit by this change, are potential candidates for transitional use, before they would be converted into their final function. Usually, in the middle-sized and bigger cities there is a lack of available private open space and also public greenery, what can be compensated with temporary use of available brownfield sites. The largest scale of possibilities for the temporary use of brownfields is in big- and middle-sized cities. On one hand, there can be a strong pressure of the problems, for example number, size or location of brownfields, on the other hand there must be high personal input in organizing the temporary use from volunteers, communities etc. (Bundesamt für Bauwesen und Raumordnung, 2004).

Successful temporary use of a brownfield always depends on different key players, which can be divided into few basic groups:

- owners of brownfields
- public authorities (politicians, municipality)
- permitting/ planning authorities
- mediators
- temporary users
- consumers (visitors, urban gardeners, etc.)

There is noticeable "evidence of a trend to greater social commitment, to more participation, to active networks and the desire to try out something new" (Lange, et al., 2007 p. 22.). People involved in these groups have time, enthusiasm, but do not have resources and space to express their opinions, try new ideas and experiments. "Social insecurity and the educated younger generation´s lack of prospects of permanent employment are leading a growing number of people to seek a niche in which they can dare try out their own social experiment and strike a balance between material prosperity and community well-being." (Lange, et al., 2007 p. 22.)

The benefits of temporary use of brownfield sites might be divided into five main groups- social, environmental, cultural, urban and economic benefits. Ideal cities of today should consist of compact, walkable, dense and diverse communities and neighbourhoods. Finding temporary use for building gaps, abandoned objects or other underused areas mean more compact buildings, neighbourhoods and finally whole cities. Temporary use of projects and activities can improve the stability and the development of urban quarters (Creativity in abundance, 2008). Temporary land-use mostly consists of the soft factors; thanks to that social benefits belong to the strongest. Brownfield redevelopment often stands or falls on its bad image, but it is very likely that successful temporary use could change it. Abandoned site is stigmatized by its previous functions or long term decay; however, bad image is often only psychological effect of the past. Sometimes it is just the fact that people overlook objects or plots which are standing idle for a long time; they simply walk past, ignoring them. When Genius Loci, is partially or completely missing, it could be restored with time-limited function.

Popular and frequent positives of temporary land use are environmental benefits. Often there is a lack of greenery in the cities or particular neighbourhoods. Green spaces are visually attractive and "improve the ecological quality of the built-up environment." (Haas, 2013 p. 199.). Turning brownfield into a park or making it in some way more green supports and helps "the urban wildlife" and makes neighbourhood not only more attractive, but also improves microclimate, prevents it from radical temperature changes or reduces carbon dioxide emissions. "Gap is currently being created between urban society and the world of complex ecosystems … because people concentrate in cities, while conservation efforts are focused on (semi-) natural and rural areas.

From the perspective of urban ecologist, cities can act as man-made habitats for wildlife, providing people the opportunity to enjoy wild plants and animals in their own environment, and thus bridging this gap." (Haas, 2013 p. 199.).

Conclusions

Urban environment can have positive effects on creation and growth of communities as they have the opportunity to build a local identity and a sense of localism around a certain space. Community gardens can have a huge impact on this process as well as on the quality of urban life beginning from producing fresh food to strengthening neighbourhood bonds. It can also have positive impacts on distressed neighbourhoods where vacant plots can be converted into community gardens or community green spaces and these improvements can have an effect on residents´ perception of safety outdoors, reduction of social problems and cultivation of social responsibility.

Acknowledgment

Acknowledgment: This contribution is the result of the project implementation: SPECTRA+ No. 26240120002 "Centre of Excellence for the Development of Settlement Infrastructure of Knowledge Economy" supported by the Research & Development Operational Programme funded by the ERDF

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Mária Turzová

HOW TO SUSTAIN URBAN OPEN SPACES: CULTIVATING VIABLE RELATION BETWEEN PEOPLE AND PLACES

This paper explores social sustainability concept from the perspective of spatial planning and landscape architecture, aiming on the cultivation of relation between people and places. Main focus and understanding of social sustainability in the study is the ability to sustain life in urban open spaces, especially public spaces. As the crucial process for achieving it should be proper cultivation of current human needs and values, especially deepening the aspects of mutual relationship between space and people, focusing on identity, memories of spaces, place attachment, spirit and soul of these spaces. So the paper pursues to formulate the concept of cultivation approach, understood as a concept improving all mentioned aspects of spaces – mainly spiritual. Furthermore, research seeks to clarify the contribution of the placemaking approach in the cultivation of urban open spaces towards social sustainability, especially of the relationship between people – communities – and the urban open spaces.

Introduction

Urban open spaces are under constant pressure, resulting to continual alteration. They are facing to various challenges arising from dynamics of contemporary human lifestyle what causes change of human needs and values. These alterations have great impact on relationship between people and their environment and finally on the state of urban open spaces – their quality, attractivity and subsequently social sustainability. Urban open spaces are then losing their identity, special sense of place. For their spiritual and symbolical vacancy - emptiness by content as the idea, spirit - they are not responding to current requests and values of people. Urban open spaces also suffer from more complex conflicts among various actors, interests and ideological layers, and then it is more and more essential that people not receive adequate satisfactory conditions on quality of life in their common environment. Accordingly, to achieve social sustainability and to sustain viable life in urban open spaces, physical and spiritual decay of these spaces should be stopped and the soul of the spaces must be cultivated.

Therefore it is really necessary to strive for the viability, livability and meaningfulness of whole urban landscape by flexible respond to changes of human values and requests. The more so, that with the increasing trend of enlarging the population in cities, the urban landscape becomes the most crucial environment for living for human.

Literature review - conceptual development

DEFINING SOCIAL SUSTAINABILITY

Strong place attachment and viable and harmonic relationship between human and places are qualities which facilitate the achievement of social sustainability of urban open spaces. In the dissertation, social sustainability of the urban open spaces is one of the final research purposes. Generally, social sustainability is regarded as nebulous concept; many authors define it in various ways (Vallance, Perkins and Dixon, 2011). The definition always depends on the perspective of view from which we consider the concept. In the table 1 is a brief overview of several definitions and viewpoints of various authors, arranged in chronological order; including general definitions and also more detail - in the context of urban development.

WCED (1987) Social sustainability is the "development that meets the needs of the present without compromising the ability of future generations to meet their own needs".

Sachs (1999) "Social sustainability in the context of whole development must rest on basic values of equity and democracy".

Sutton (2000) Social sustainability is the "ability to sustain", referring to "an access and a step in which sustainable can be maintained".

Polese and Stren (2000) Social sustainability is presented in context of urban development. "To promote social sustainability, the development of urban areas should improve the quality of life for all people and at the same time foster an environment that encourages integration whilst allowing for culturally and socially diverse groups to cohabit."

Littig and Griessler (2005) "Social sustainability is given, if work within a society and the related institutional arrangements satisfy an extended set of human needs [and] are shaped in a way that nature and its reproductive capabilities are preserved over a long period of time and the normative claims of social justice, human dignity and participation are fulfilled." Social sustainability in this viewpoint highlights the relations between nature and society.

Vallance, Perkins and Dixon (2011) Social sustainability is "concept in chaos", which is possible to define from many views. For authors, social sustainability comprises tripartite of social sustainabilities:

(a) "development sustainability" addressing ability to sustain the basic needs, the creation of social capital, justice and so on;

(b) "bridge sustainability" concerning changes in behavior so as to achieve bio-physical environmental goals;

(c) "maintenance sustainability" referring to the preservation – or what can be sustained – of socio-cultural characteristics in the face of change, and the ways in which people actively embrace or resist those changes.

Table 1 - **Overview of definitions of social sustainability**

Opposing views

There are a lot of diverse viewpoints of the social sustainability concept. All of them refer to long-term ability of development what sustains qualities, characteristics and aspects important for human life in present also for future life.

However, the understandings of the ways how to "sustain" differ among definitions.

The differences between understandings of social sustainability, especially ways of verb "sustain", are described and expressed clearly in the expressions of verbs "develop", "bridge" and "maintain" (Vallance, Perkins and Dixon, 2011). On the one hand social sustainability in the first understanding of "sustain" as "develop" share the common goal of improving the environment as the dynamic process – development, creating. On the other hand, another view on social sustainability characterized it as the "bridge" – concerning the changes in behavior trying to achieve goals. As the other different view on the way of understanding on "sustain", the expressions "maintenance and preservation" are used, where the environment and its characteristics facing the change should be protected and the crucial question is, how people can actively resist the alterations.

Definitions from different studies describe many similar aspects and elements which arise from the very basis of the concept social sustainability and which have the great impact on the social sustainability. The most frequently mentioned characteristics are; a focus on fulfillment of human needs, human values, an aspects of equity, democracy, an improvement of the quality of human life, an access, an integration, an ability of cohabit between diverse social and cultural groups, a social justice, human dignity and a participation, a preservation of environment and nature, a relationship between environment and society (WCED, 1987; Sachs, 1999; Sutton, 2000; Polese and Stren, 2000; Littig and Griessler, 2005).

However, various authors often highlight other aspects as the crucial principles of social sustainability. Littig and Griessler (2005) describe that the theory of social sustainability is actually based on the concepts of needs and work. That concept is based on the activities that are applied to fulfill human needs by considering the interdependence process between society and nature. The focus is on the man and nature relationship on human action.

The Model of Social Sustainability developed by WACOSS (2002) reveals five principles of social sustainability. Those are equity, diversity, quality of life, interconnectedness, and democracy and governance. In comparison, Magis and Shinn (2009) provided with four principles consist of equity, human wellbeing, democratic government, and democratic civil society. Equity involves generations and cultural interaction, and individual, community and political participation (McKenzie, 2004). As McKenzie (2004) adds, very crucial is then the process of improving the quality of life within communities. In this sense, the quality of life and the human well-being are interrelated toward the formation of livable communities by considering education and health care, access to public goods and services, employment, transportation, as well as housing (Magis and Shinn, 2009).

Viewpoint of this study - People cultivate places, as much as places cultivate people

In this study, the crucial focus and understanding of social sustainability is the ability to sustain life in urban open spaces, especially public spaces. As the crucial process for achieving it should be the research and then proper cultivation of current human needs and values, especially deepening the aspects of mutual relationship between space and people, identity, memories of spaces, place attachment, soul of these spaces.

The research bases on previous literature review about social sustainability in this article, focusing especially on the aspects of culture, diversity, integration, equality, quality of human life, interconnectedness, access, participation and community. This article also agree with the statement, that social sustainability of urban open spaces and its attractivity, viability and success strongly rely on how people adopting, using and managing the space (Harun et al., 2014).

Such as viewpoint of McKenzie (2004), author of this article considers as very important the cultivation of the relationship between livable communities and livable places for achieving social sustainability. That has then great impact on the quality of life and the human well-being, and also on the quality of physical, spiritual, symbolical characteristics of spaces and their genius loci.

Figure 1: **Mutual relationship between people and space**;
Turzová, 2015.

Contributing approach of the research in the issue of achieving social sustainability in urban open spaces is exactly the focus on the impact of the cultivation of mutual relationship between people and places, highlighting especially the aspects of values, identity, philosophical, spiritual and symbolical elements. These elements are considered as really important aspects for social sustainability. At the same time, the research also raises questions what could be the role of urban design in articulation of identity, philosophy and soul of the urban open spaces.

Research objectives

To sum up, the purpose of the whole research is searching how to respond on the problematic decay of the urban open spaces. As the decay, it is not meant only their physical state – the urban design and the other physical characteristics - but also their philosophical, spiritual and symbolical layers, so important for social sustainability.

Figure 2: **Physical decay of the state of urban open space – does it influence the identity of space?**;
Turzová, 2012.

Furthermore, this paper seeks to clarify the contribution of the placemaking approach in the cultivation of urban open spaces towards social sustainability, especially of the relationship between people – communities – and the urban open spaces. The paper also pursue to formulate the concept of cultivation approach, understood as a concept improving all mentioned aspects of spaces – identity, spirit, memory, place attachment, symbolic and philosophical values and their mutual relation with human and their current requests and values. Therefore, it is also important to focus on various concerns between designing, planning, management of urban open spaces and users search for livable spaces and on sustainability of communities. That is the field, where the placemaking approach can be inspiring and helpful.

In further research, there is also a purpose to detect ways in which various elements of social sustainability might align or conflict and to highlight the correlation in relationships between people themselves and then environment and society.

Core construct

CULTIVATION OF URBAN OPEN SPACES TO SOCIALLY SUSTAINABLE THROUGH PLACEMAKING

Since there is acute necessity of striving for the viability, livability and finally social sustainability of urban open spaces, a conceptual approach flexibly responding to human values and requests should be formulated. The approach should be very efficient to react to ongoing alterations in mutual relationship between people and urban open spaces.

WHAT IS CULTIVATION?

Generally, the meaning of cultivation is the process of sophistication and acculturation. According to Oxford Dictionaries is defined as;

- "The action of cultivating land, or the state of being cultivated", where cultivating means process of improving, developing and promoting into growth While in Oxford Advanced Learner's Dictionary definition is;
- "The deliberate development of a particular relationship, quality or skill"

In connection with landscape, cultivation is defined as the process based on human existence, when things are growing and it is possible to show up the core ability of culture. Then developing spatial opportunities lead to multitude of possibilities, expanding knowledge, innovation, valuing beauty, perception, enriching experiences (Marques, 2014).

Hence, the cultivation in the urban open spaces is understood as the process, when complex relations between people and spaces, aligning and conflicting aspects, values and characteristics are taken in account and developed into higher, deeper or richer levels of understanding, participation and sharing. And so the fuzzy and anonymous relations between people and their environment are harmonized.

When a space becomes a place- placemaking

Placemaking concept is chosen to be studied for its core; for the narrow relation between people and space in improving the environment – the relationship so important for this research. One of the simplest definition reads as follows; "Placemaking is the process of creating quality places that people want to live, work, play and learn in – places with a strong sense of place." (Wyckoff).

Placemaking is transformative approach that inspires people to collectively create and improve their public places. Through placemaking, the public spaces become

Figure 3, 4*:*
Quality of urban design is not so determining aspect for strong sense of place - Proper urban design but emptiness in Austrian town;
Turzová, 2015 - (3).

Meadow with a weak intervention of urban design but strong identity in Krakow, Poland;
Turzová, 2015 - (4).

the heart of every community, strengthening the connection between people themselves and the places they share. This conceptual approach refers to a collaborative process by which people can shape the public realm in order to maximize shared value (PPS).

For better understanding, the importance of the conversion from the space to place should be elucidated precisely. This difference is very important for the purpose of the paper. Space and place are two very different, if often confused, concepts: space is the base experience of our embodiment, and it is objective, impersonal, undifferentiated. Place, however, involves a particular kind of presence that includes, in addition to physical space, memories, experiences, and behavioral patterns associated with the locale. It is personal, subjective, and communitarian (Norberg-Schulz, 1979).

Exactly that is the key for placemaking – making space for place, mainly engaging the communities. Nevertheless, placemaking approach can be criticized for focusing mainly on the promoting better urban design of public spaces. But, there are some materials refuting these claims. Planning, design and educational organization Project for Public Spaces (PPS) points out other aspects that are in the interest of placemaking approach; it also facilitates creative patterns of use, paying particular attention to the physical, cultural, and social identities that define a place and support its ongoing evolution. Placemaking is building both the settlement patterns, and the communal capacity, for people to thrive with each other and their environment. It is community-driven, bottom-up approach.

The concepts behind placemaking originated in the 1960s, when writers like Jane Jacobs and William H. Whyte offered groundbreaking ideas about designing cities that catered to people, not just to cars and shopping centers. Their work focused on the importance of lively neighborhoods and inviting public spaces. Whyte emphasized essential elements for creating social life in public spaces. (PPS)

Discussion and preliminary conclusion

Improvements of placemaking approach towards social sustainability

Through placemaking approach, especially if community-based participation is effective and really in the center, a placemaking process successfully uses a local community's assets, inspiration, and potential. Then, it results in the creation of quality public spaces that contribute to people's health, happiness, and well being and then finally to social sustainability of the urban open spaces. Indifference of users towards urban open space is reduced, such as the anonymity and unwillingness to take care of it. People are able to adopt the place; they use and manage it more effectively, so the social life in urban open spaces is sustained. Subsequently, the place attachment intensified, also the identity of space, viability and attractiveness. Discrepancy in relationships among users tends to harmonize, since also sense of community and relationships between users are cultivated.

Gaps of placemaking approach - space for improvement

Nevertheless, there are still the gaps in placemaking approach, what should be improved for purpose of the research. The memories and spirit of urban open spaces can sometimes clash and act counterproductive, especially when the space conceals a lot of symbolic layers through time and various cultural and societal eras. It is not usually possible to detect by regular users, so the special identity of place can be smeared and undermined by using placemaking approach. It is then likely that despite of good intensions of community through the process, the sense of space would be destroyed. Such situation could easily aggravate the original state of space and could degrade the relationship between people and place to even worse. That has obviously negative impact on the viability of urban open space and on its social sustainability and also on human wellbeing.

The reason of it is, that the placemaking approach does not focus so much on deeper and higher psychological and philosophical layers of relationship between human values, memories and requests and their mirroring in urban design, ideological content and symbols of urban open spaces. However, these aspects are accordingly crucial for achieving social sustainability.

To sum up, these gaps in placemaking approach are the reason, why and in what way the cultivation concept is intended to be formulated in further research.

Acknowledgment

Acknowledgment: This contribution is the result of the project implementation: SPECTRA+ No. 26240120002 "Centre of Excellence for the Development of Settlement Infrastructure of Knowledge Economy" supported by the Research & Development Operational Programme funded by the ERDF

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Zuzana Ladzianska

URBAN DESIGN EVALUATION IN PUBLIC SPACES OF BRATISLAVA

Introduction

The aim is to present the urban design evaluation of the public spaces with the target on their size, location, quality and occupation by visitors. In the focus will be the outline for success and failure of selected open public spaces in the relation to the social mix of visitors located in Bratislava. This comparative study is based on the case study analysis including on-site analysis, literature survey, and media analysis.

Comprehensive analysis of public spaces in the broader city centre is followed by the deep analysis of the urban design quality for the ongoing riverfront development projects in Bratislava on the river Danube. Comparison starts with the historical analysis of project sites, their relation and connectivity to the historical city centre, land-use analysis before the project visioning, project communication and marketing analysis, services analysis with the focus on strength and weaknesses of each project. The issue of the riverfront redevelopment and the quality of the public space and its urban design is of an international interest as it is on display for each visitor of cities lying on cross-national rivers, so the river Danube.

Methodology

The presented paper is mainly based on the case study analysis, including literature survey, site and print media analysis. Secondary data was reviewed and is based on the relevant information needed for the chosen topic, including survey of the online sources. The most crucial part was the print media analysis in conjunction with previous knowledge on the topic. It was necessary to study still available data (often older than 10 years) especially online and to put the emphasis on the objectivity throughout of the analysis process. Site analysis was done in diverse periods of the year and day to achieve the most complex picture of both sides. The focus was on comparison of both projects from the analysed data and the reality subdivided into six subchapters for each described project.

Theoretical Background

The aim of the paper is to outline the probable key behind the success and failure of described redevelopment projects. In the focus will be the importance of the public space in the redevelopment processes especially with the contact to the river. Water, as a feature of nature, should be used to its maximal extend especially if situated in central position of cities in contact with the existing build environment and living city. This can be achieved by creation of high quality public space with landscape feature and creation of a contact zone to the river.

The case study of two redevelopment projects on the river Danube in Bratislava is based on the theoretical background of two main issues; gentrification and brownfield redevelopment. Both projects are former brownfield site and throughout their redevelopment the environment have been influenced in the sense of gentrification. Theoretical background gives a very short preview on both topics and states the most important facts relevant for the case study.

GENTRIFICATION

As described in the book Gentrification by Loretta Lees (Lees, 2008), the term gentrification was for the first time defined in 1964 by the British sociologist Ruth Glass who is perceived as one of the pioneers of urban sociology in Europe. She used the term gentrification to describe distinct processes of urban change affecting the inner parts of London. Nowadays, the changes described, are known as the classical gentrification. She has investigated this process on disinvested inner-city neighbourhoods which are upgraded by pioneer gentrifiers where the indigenous residents are displaced and working-class housing becomes middle-class housing in London. Throughout the history we can follow several waves of gentrification (Figure 1).

Gentrification, even 50 years later after the first definition by Ruth Glass, is still a current topic in urbanism. It is mainly perceived as a transformation of a working-class or vacant area of the central city into middle-class residential and/or commercial use. It is a process that has attracted the attention of the media, local governments, urban planner, architects and developers, businesses, city stakeholders, and political activists. In the 1990's in several works we can follow the shift from the classical gentrification to the new-build gentrification described by Neil Smith as a much broader phenomenon. He perceives it as a highly dynamic process where the reinvestment of capital at the urban centre which is designed to produce space for a more affluent class of people than currently occupies that space (Smith, 1996).

1950s – 1973	**First-wave gentrification – Sporadic gentrification**	Prior to 1973, the process is mainly isolated in small neighbourhoods in the north eastern USA and Western Europe.
	Transition – Gentrifiers buy property	In New York and other cities, developers and investors used the downturn in property values to consume large portions of devalorised neighbourhoods, thus setting the stage for 1980s gentrification.
1970s – 1980s	**Second-wave gentrification – The anchoring of gentrification**	The process becomes implanted in hitherto disinvested central city neighbourhoods. In contrast of the pre-1973 experience of gentrification, the process becomes common in smaller, non-global cities during the 1980s. In New York City, the presence of the arts community was often a key correlate of residential gentrification, serving to smooth the flow of capital into neighbourhoods like SoHo, Tribeca, and the Lower East Side. Intense political struggles occur during this period over the displacement of the poorest residents.
	Transition – Gentrification slows	The recession constricts the flow of capital into gentrifying and gentrified neighbourhoods, prompting some to proclaim that a "degentrification" or reversal of the process was afoot.
Mid 1990s –	**Third-wave gentrification – Gentrification returns**	Prophesies of degentrification appear to have been overstated as many neighbourhoods continue to gentrify while other, further from the city centre begin to experience the process for the first time. Post-recession gentrification seems to be more linked to large-scale capital than ever, as large developers rework entire neighbourhoods, often with state support.

Figure 1: **Waves of gentrification**
(Stage model of Gentrification according to Hackworth and Smith (Jason Hackworth and Neil Smith, 2001) Lees, 2008)

BROWNFIELD SITES

Urban derelict sites are results of changes in functional use of the sites. The loss of main functions of the area leads to the degradation of the environment and further loss of the reputation and attraction of the sight from the point of view of users. Brownfields are predominantly perceived as a result of industrial destructuralization and wave of the recession. Brownfields regeneration is very often very complicated with respect to the strict legislation and environment protection as well as with the respect to the housing market and banking sector. Sustainable way of regeneration requires the integration of social, cultural, economic and environmental aspects (BRIBAST, 2010).

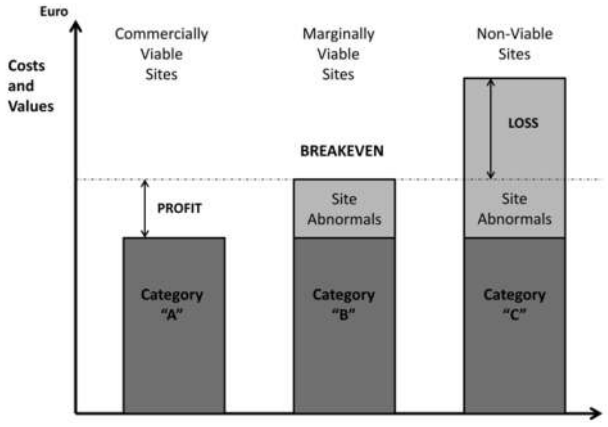

Figure 2: A-B-C-**Model for the brownfield site regeneration according to BRIBAST** (BRIBAST, 2010)

Integrative approach to regeneration lies in a sustainable way in implementation of combinations revitalization strategies based on the knowledge of mutual links among economic recession, degradation of the physical environment and social stress factors. Strategy for brownfields regeneration depends on external and internal framework conditions for the process of regeneration. One of the key factors for strategy selection is the possibility to gain the financial support for regeneration of external resources and total costs for the regeneration of the site (Figure 2). Application tools for the brownfield sites regeneration can be divided into passive (e.g. local taxes, intervention for investors) and active (e.g. improvement of the infrastructure, social infrastructure, transport, social infrastructure, environment, economic activities) financial interventions. The legal framework of the environment, lack of trust and practical experience in majority of the sites is a limit for the private-public-partnership, but the cities should look for other forms to how to use this approach for their advantage (BRIBAST, 2010).

Brownfield sites are potential sources of pollution depending on their history. There is no official document with the number of contaminated brownfield sites in Slovakia, yet. Based on the site history, it is possible to predict what type of contamination and in what extent to expect. In urban areas, especially in larger cities, brownfields from industrial production can be found. The environmental burden of these sites is more significant as they present danger to the urban environment they are settled in. Each soil, water, air contamination must be

remediated in accordance with verified processes, as well as in accordance with local laws. The most well-known example of decontamination in Slovakia is the Eurovea Project. Soil and water of the site were heavily contaminated by oil and heavy metals from the past production. Excavation of the soil into 22m depth was necessary and further disposal of the soil was inevitable. Less polluted soil and water were decontaminated in situ. Remediation and decontamination is very costly and has a direct impact on the financial part of a project. If the costs for dismantling environmental burdens are higher than the potential profit, brownfield sites are not being remediated and are left in the current state of art.

CREATIVITY, CULTURE AND CREATIVE CITIES AS AN APPROACH FOR SITE REDEVELOPMENT

Creativity itself has a very long history and therefore we can find thousands different types of creativity and always from a different point of view. In general it is very difficult to define the creativity. As many authors as many definitions. Robert Weisberg perceives creativity as a work of the history´s most creative personalities and innovation (Weisberg, 1993), and John Howkins links the word with the spiritual and very personal point of view (Howkins, 2005). Culture is an important source of creativity. Creative industries foster on the rich core of the cultural heritage, gifted artists and culture professionals. This core is linked with connected innovative services bringing creativity to the market (Zlatá, 2011). Many professionals consider linkage of arts and creativity with innovation crucial for the creative potential of the place. Richard Florida, the author of "Creative Class", sees the connection of culture with economic growth by producing incentives that promote effort, thrift and hard work. Culture according to his view motivates economic growth by focusing human energy and effort on work and away from the pull of distraction (Florida, 2005). Charles Landry describes creativity as historical evolution, while understanding a place from which culture comes from. This attitude creates a potential for a city to rethink its attitude and vision for the future. Landry, as the inventor of the idea of "creative cities", sees a hidden potential in each city. This concept is a positive one; he assumes that ordinary people can make extraordinary happen if they receive a chance to do so (Landry, 2008).

Creative cities are spaces you want to live in, places to be visited (Hartley, 2005). Often they possess various characteristics as: vibrant arts and cultural sector, capability to produce employment, distribution of resources, etc. As summarized by Jinna Tay, "creative cities" is about how local urban spaces can be remained, rejuvenated and re-purposed within a competitive global framework. Traditionally the city has been studied from disciplines as architecture, sociology and urban planning, developing ideological concerns The concept of the creative city can be replicated but the success itself is depended on how it deals with long-term development questions, such as economic and social sustainability, gentrification and local displacement, exclusionary practices, and local identities. Creative expression may come up against conservative systems or ideological cultural bias, which may act to smother the natural diversity of creativity (Tay, 2005). This renewed focus on social identities also manifest in lifestyle and service consumption as cafes, restaurants, bars, tourism, the night-time economy. Cities that offer lifestyle and creative sector but at the same time they provide affordable loft spaces and heap drinks will always be greater attracter for creative workers and diverse communities. This social aspect of the creative industries links the cultural network to economic and creative production and the city of Newcastle upon Tyne can be perceived (Ward, 2002) as an outstanding example able to compete world-wide known centres of culture.

There is a growing demand for free and affordable space mainly by artists, creatives, social initiatives, youth and sport projects. Facing the problem of derelict brownfield sites, people involved in such developments reintegrate apparently redundant spaces into the urban structures. These "space pioneers" (they discover abandoned sites and reinvent them), often perceived as temporary users, are evidence of a trend to greater social commitment (S. f. S. 2007), to more participative approach (BRIBAST, 2010). Such creativity has a chance to blossom on disused sites and in vacant buildings. The aim is to initiate a temporary use at a suitable site or premises. At the same time, the concept of many temporary use projects rests on the liberty of organizing everything oneself (S. f. S. 2007). Space pioneers, as mentioned above, apply particular criteria to their search for the right location. Alongside the characteristics of the location itself, a personal commitment to work, available networks, mutual voluntary support, creativity and a love of experimentation, all play a role at the start of a temporary use project. They re-cycle the structures for little cost trying to compensate the deficits of a peripheral location by actively networking with other temporary users. Shared locations help to create creative clusters and support the creative environment of the site.

Eurovea

CREATIVITY, CULTURE AND CREATIVE CITIES AS AN APPROACH FOR SITE REDEVELOPMENT

"Eurovea" is the name of a new international trading centre in Pribinova Street on the left bank of the Danube River, between the Apollo bridge and the Old bridge in Bratislava, in the vicinity of the new Slovak National Theatre building and office building Tower 115. With its location in the city centre it connects the river embankment with the old town and extends the offer of spaces for shops, entertainment and leisure. It is considered to be a successful urban extension of Bratislava´s (relatively

small) historic city centre. The whole area of “Eurovea” is a former brownfield site. An oil refinery was originally located in this place, which was founded in 1885 and produced gasoline, kerosene, paraffin, candles, mineral jelly and asphalt. In 1944, during World War II the refinery was bombed and 80% of the factory was destroyed and continuously caused contamination of soil. All refinery activities were definitively shut down at this place in 1963 when the plant moved to other location in the outskirts of the city.This section may be followed by a section of acknowledgements if applicable.

VISIONING, PLANNING, PROGRAMMING

Attractive site in the city centre has been abandoned for many years. The project was implemented thanks to the Irish developer group that respected the valid General City Plan which prescribes amenities and urban greenery for this area. However, the final project did not result in any urban or architectural competition and did not pass through large public discussion either; it was a direct contract (which is a usual procedure in Slovakia).

IMPLEMENTATION PHASE

In July 2006, the execution of the first phase of the project began. “Eurovea” (phase I) was opened in spring 2010 and in an area of 230,000 square meters it offers 60,000 m2 of shopping spaces, leisure facilities and entertainment as well as other area over 60,000 m2 of office spaces, hotel facilities and apartments. The completion was possible thanks to foreign capital of the Irish developer who cooperated also with Slovak architects on the final design. The project is situated around a new central square and includes a unique riverside park and terraces. “Eurovea” includes not only offices, apartments and a hotel but also the largest underground car park for 1,700 cars in Bratislava. Almost two thirds of its area is greenery and public spaces. The most popular part of the project is the “Eurovea shopping place Galleria” with the area of 60,000 m2. The first phase consists of the following parts: the Danube riverside park, apartment complex, “Eurovea Galleria” - a shopping centre, a place for leisure - fitness centre, casino, 25-meter swimming-pool, multiplex cinema with 9 screens, high standard office spaces and a five-star hotel.

The second phase of the planned project would also include high-rise office buildings as well as additional hotel capacities and shops. It expects construction of modern skyscrapers, the highest one of 33 floors and the other one in the range of 13-28 floors.

OUTPUTS AND RESULTS

“Eurovea” belongs to successful urban achievements within the city. This project resulted in a new important zone that exceeds Bratislava’s boundary and people started to enjoy it. The spaces among the building are proposed as traffic-free and their surroundings are formed as a pedestrian zone (the Danube promenade, several larger urban square shapes). These spaces are closely linked to public indoor spaces of shopping and entertainment mall. The interior “galleries“ serve as communication spaces as well. There are numerous socializing facilities operating inwards and outwards the structure. Thanks to this project, the river Danube "returned" back to Bratislava - well designed and implemented promenade on the left bank of the river (it also forms part of the flood-protection line) is full of people not only during weekends and it became the place for a number of various social interactions.

An important part of the project, in terms of brownfield regeneration, is the object of the Warehouse No. 7. The reinforced concrete structure was built in the 20s of the last century in a functionalist style, reminiscent of classical style. The industrial nature is enhanced by the railway track leading directly to the object, which is still preserved, and which originally connected the entire embankment of the Danube from the refinery to the contemporary port. The building was completely renovated, at present there is an exhibition related to the “Eurovea” construction and spaces where temporary exhibitions have been organized. The role of the Warehouse No. 7 should increase its importance in the near future, when it should be transformed into a city auditorium, its capacity should be increased and it should become an alternative for the malfunctioning of PKO (Bratislava’s Park of Culture and Leisure). Its utilization should be mainly for social and cultural events of larger scale. Currently, the Warehouse No. 7 is located on the edge of the zone, but if the planned second phase of developing intentions would be realized it would get to the central position of the whole zone and together with the new building of the National Theatre it would have a chance to create a cultural counter-weight to the hegemony of current "consumerism" character of the urban area.

SUSTAINABILITY PRECONDITIONS

“Eurovea” is a successful project, which was definitely beneficial for Bratislava (often confronted with the similar “Riverpark” project located only about 2 km east from “Eurovea”, which has a superior architecture, but its contribution to "cityness" is minimal). From the commercial and urban points of view it has been the most successful brownfield transformation in Bratislava so far. The integration of the object of Warehouse No. 7 into the project can be highlighted and it is only a pity that there were no more buildings from the original site of the refinery preserved that could have been incorporated into the project (but unlike other projects we, at least, did not witness physical destruction of historic industrial structures). “Eurovea” contributes to the expansion of "pedestrian zone" of the city, it is an example of a compromise between the need of the city and the objectives of investors and, thanks to this, it are undoubtedly facing a bright future. The Danube riverside promenade and the adjacent lots were effectively taken account of in the architectural concept; there is good permeability. Further development of the adjoining lots will integrate the complex even better into the city-scape.

PROJECT COMMUNICATION

Grounds under the "Eurovea", former oil refinery, were bought by the Irish developer in the late 1990´s. The developer has waited several years for the ideal timing of the project begins. The site had a very strategic position with only one weakness – heavy ground pollution which did not stop the developer in future plans. Adjacent sites have undergone significant change. Originally they were used by small and medium sized enterprises, alternative groups, artists, dancers, small theatre with several pubs and alternative night scene. In the beginning of 2000´s there was a negative wave against demolition of the site and destruction of an alternative artistic scene in the city centre.

This site is situated in so called "Pribinova" zone with the final mix-used function according to the General City Plan. After long period of ground decontamination the site was ready for further development including a new flood protection incorporated into the project. The project was elaborated in cooperation of Slovak and foreign architectural offices without previous competition but fully in correspondence with the valid General City Plan. The whole project was communicated with the public and no considerable errancies have been detected. Open and freely accessible public spaces and visual connection to the river have lead to the positive acceptance by the wide public.

River Park

CREATIVITY, CULTURE AND CREATIVE CITIES AS AN APPROACH FOR SITE REDEVELOPMENT

"Riverpark" is a new multi-functional complex on the left side of the river Danube. The location is in a vicinity to the castle and the historical city centre of Bratislava with a direct view on the Danube floodplain forests called Pečniansky forest. With its location in the city centre it provides a range of services as a five star hotel, residence apartments, offices, cafes, restaurants and shops. This complex was built on a site where the main architect of the city Bratislava had its seat and partially on the grounds of the former Park of Culture and Leisure (PKO). The department of the main architect was discharged in 1990 and the building was torn down 10 years later in the year 2000. Due to the change of the system former site was not any longer used and from today's point of view is perceived as an underused area. On the site no major contamination was detected.

VISIONING, PLANNING, PROGRAMMING

Attractive site in the vicinity of the city centre has been abandoned for many years. The project was implemented thanks to the domestic developer group J&T REAL ESTATE, a.s. based on the valid General City Plan which prescribes amenities and urban greenery for this area. However, the final project did not result in any urban or architectural competition and did not pass through large public discussion either; it was a direct contract to the Dutch architect Erick van Egeraat (which is a usual procedure in Slovakia) and it was finished on the site by Slovak architects.

IMPLEMENTATION PHASE

July 2006 was the execution of the first phase of the development project. "River Park" was opened in June 2010 and in an area of 32,000 square meters it offers 202 premium residence apartments, five-star Hotel River Park, wellness, fitness centre and spa, 29,000 square meters of office premises, cafés and restaurants, shops, bank, post office, Riverpark Dance School and provides underground car park for 1,100 cars out of which 400 are exclusively assigned for residents. River Park consists of four blocks, each of them with a distinct character and function. River Park 1 building is situated at the western corner of River Park, consisting of residence apartments looking over the Danube as well as offices and shops, near the former PKO. J&T River House is the visual domain of the complex. It is located in the centre of the complex and its upper floors extend over the promenade up to the river Danube. Kempinski Hotel River Park forms a square along with J&T River House. River Park 2 is the most extensive block and the closest to the city centre. In this block are situated residence apartments with services on the ground floor.

The second phase of the planned project would also include high-rise office buildings as well as additional hotel, shop and housing capacities. It expects construction of a multifunctional hall for approximately 1000 visitors as a substitute for still existing, but not any longer in service, PKO who used to be the centre of culture and leisure (housed 2 multifunctional halls with the capacity of 3000 visitors).

OUTPUTS AND RESULTS

"River Park" belongs to new urban achievements within the city centre. This project resulted in a new zone that has gentrified the area and has a direct impact on the visiting milieu from "accessible to everyone" to "upper middle class". The spaces between buildings and the river are traffic-free and their surroundings are formed as a pedestrian zone leading to an open space park. In the public space several statues are displayed. These spaces, depending on the year season, are used for diverse applications (e.g. in winter time there is an ice skating area for public).

SUSTAINABILITY PRECONDITIONS

"River Park" is only partially a successful project, containing superior architecture, but its contribution to "cityness" is minimal, in comparison to a similar project "Eurovea" located only about 2 km to the west. "River Park" contributes to the continuation of "pedestrian zone" of the city and provides a small park with playground for children.

From the commercial (already two years before the completion, in 2008, developers were forced to reduce the selling prices of all premises in 40% to burst the sale) and urban points of view this project has failed to become a successful transformation in Bratislava so far. The negative perception comes from the unprofessional discussion and treatment from the site of the developer as well as ongoing comparison of the public space quality in the nearby redevelopment project "Eurovea".

PROJECT COMMUNICATION

From the early beginning, since the grounds were bought by the developers in the early 2000´s, the development project was negatively perceived by the wide public. It has all started with not transparent sell of the grounds under the PKO under the supervision of the former administration of the city Bratislava with Andrej Ďurkovský as a mayor. The major problem was the sale of very lucrative grounds below the expected price to developers. The conflict continued when the parts of the ground had to be bought back by the city due to the necessary street and pedestrian walkways reconstruction (bought for much higher price as sold to the developer) and afterwards were given back to the developer.

Several urban studies for the zone have been elaborated, but unfortunately none of those have been adopted as the official Master Plan of the Zone. The only valid document for this area was the General City Plan with mix used function and recreational amenities. The investor has fulfilled the functional requirement even though the structure density and the height restrictions are very questionable. The development project did not undergo any national nor international competition; it was directly given to the Dutch architect Erick van Egeraat. This architect caused another negative wave with his famous quote: "Bratislava actually never liked its river". He has developed the main idea of the River Park which was further elaborated by Slovak architects. Many people do not agree with this quote, nor were they convinced by the new design. The access to the water is even more restricted due to the newly rebuilt flood protection on the embankment of the river Danube.

The continuation of the project causes the most negative feelings in the public. 50 years of history and culture should be torn down with no guaranty for the replacement. The grounds under the meant River Park II are grounds of the former Park of Culture and Leisure (PKO) widely used by the public for diverse occasions (concerts, exhibitions, competitions, balls, etc.). Developers had the permission to tear down the complex and start with the new development until April 2009 during the crisis. In the meantime activists started to gain signatures against the demolition and the city tried to repurchase the grounds without success. Nowadays PKO again belongs to the city even though it is not in operation (the city has received the building in very bad conditions) and the whole project continuation is not clear and convincing.

Conclusions

The paper describes two Danube riverfront projects situated in Bratislava, capital of Slovakia. Both projects described, Eurovea and River Park, are situated in the central part of the city, just a walking distance from the historical city centre, joint by the quayside walk along the river. Both project have been developed and opened in the same period of the time, both built on the left embankments of the river Danube, both creating attractive places in some specific way. Eurovea was built by the Irish developer; River Park was built by the Slovak developer. In the paper both projects are described from their initial phases, visions, planning, implementation, results and communication with public. In many respects they show similarities and some differences. Differences of both projects can be already found in the initial situation. Eurovea is situated on the former oil refinery while River Park on the former underused sites. The Irish developer had to invest much more money into the project preparation due to the heavy ground pollution. It is logical that the Eurovea project had to be oriented more towards the consumption to assure financial return of the investment. The range of services and amenities of both projects vary. The most prevalent difference is in the type of retail offers. Eurovea is focused on a shopping mall with entertainment while River Park is focused on permanent and temporal housing (both services are being provided by Eurovea too).

The most visible difference is in the offer of the open space. Both project offer open public spaces, both are situated on the main river Danube promenade; both have incorporated the new flood defence into their urban design. The difference lies in the approach. While River Park continues in the traditional way where the flood defence is in the form of a steel-concrete rail structure even closing the former balconies used for the river Danube observation, Eurovea project opens the space as close to the river as possible while making the flood defence as a part of the pavement (in case of danger mobile flood protection is raised on the site). The second approach allowed to open the space and to use by now unused river Danube embankment. Creation of the green spaces with trees, children playgrounds, relaxation areas and piers allowing a better view on the river have led to a very vivid open space accessible at any time. In comparison River Park does not provide a direct connection to the water, it is based on the display of art and architecture. The main task can be answered whether the success of one project lies in a quality, better said approach to the public space and the overall acceptance of the wide public in the case of Eurovea. The question remains in which respect negative communication towards the public has influenced the overall perception of the project River Park.

Acknowledgment:

This contribution is the result of the project implementation: SPECTRA+ No. 26240120002 "Centre of Excellence for the Development of Settlement Infrastructure of Knowledge Economy" supported by the Research & Development Operational Programme funded by the ERDF

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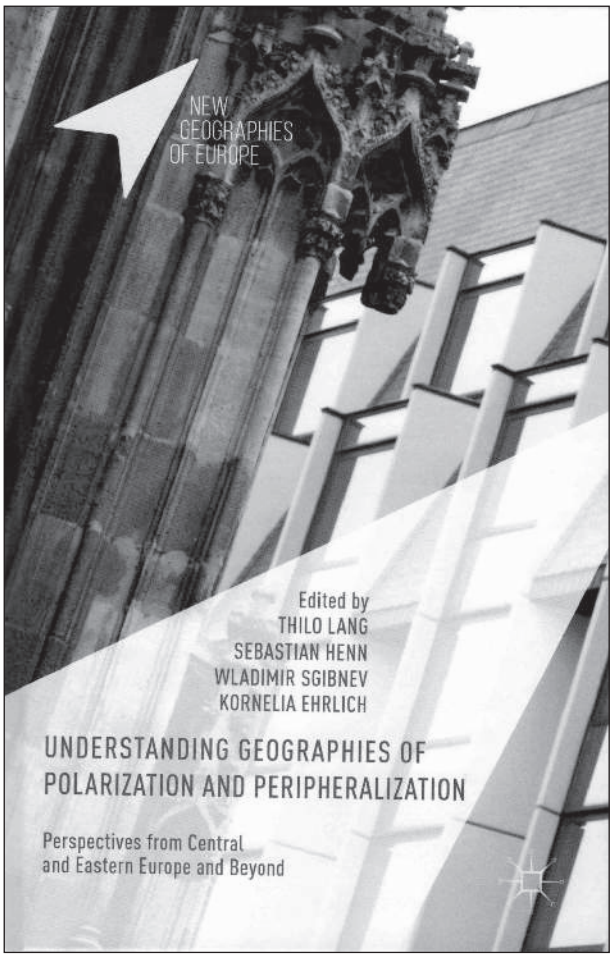
UNDERSTANDING GEOGRAPHIES OF POLARIZATION AND PERIPHERALIZATION



UNDERSTANDING GEOGRAPHIES OF POLARIZATION AND PERIPHERALIZATION

Palgrave Macmillan
Basingstoke,
Hampshire, UK,
352p.

ISBN 978 – 1 – 137 – 54202 – 1

The book „Understanding Geographies of Polarization and Peripheralization" arose from empirical observations of recent spatial changes in Central and Eastern Europe (CEE) and from the engagements with current shifts in geographical thinking to reconsider research results. The book is engaged with the concept of polarization and peripheralization in order to grasp these phenomena which have become highly pronounced in CEE countries over the last two decades. Peripheralization and polarization are understood as analytical concepts that facilitate process-based relational understandings of spatial differentiation and their connection to wider inequalities. Although the focus lies on the regional scale, a multilevel conceptualization of the phenomena under observation is tackled too. As the relation of core and periphery is imanent to the concept, peripheralization implies process of centralization and thus forms of socio-spatial polarization at various scales. Such forms of polarization are intrinsically connected to discourse which places higher value on particular regions and developments and thereby devalues others.

Some authors define regional peripheralization as the growing dependence of disadvantaged regions on the centre, it means it is not only the simultaneity of a number of features constituting the formation of peripheries, such as distance, economic weakness and lack of political power, but is often also the dynamic formation of core and stratified labour mobility and an overall decline of birth rates, which is particularly sharp in CEE countries. The degree in population has been particularly pronounced in structurally disadvantaged rural and deindustrialized regions as well as many inner-city and high-rise edge-of-city areas.

Our colleagues Maroš Finka, Tatiana Kluvánková and Vladimír Ondrejička contributed to this book with the paper „Concept of Polycentric Governance for Fuzzy Soft Spaces as a Challenge for Central European Peripheral Spaces" where they had assessed responses to challenges of globalization and European Integration and point to polycentrism, clustering and soft governance for fuzzy spaces as appropriate solutions.

Dagmar Petríková

Katarína Karasová
Martina Chrančoková

KICK OFF MEETING YMOBILITY

Youth mobility is a relatively new but more and more noticeable and increasing phenomenon characterizing the EU territory and, more in general, the world context. YMOBILITY's main aim is to study youth mobility, considering individuals and regions, causes and effects, and short- and long-term implications, and providing scenarios and policy recommendations. International project Ymobility - „Youth mobility: maximizing opportunities for individuals, labour markets and regions in Europe" belonging to the Project Horizon 2020. Nine European countries participate in this project: Italy, Germany, Great Britain, Latvia, Slovakia, Romania, Ireland, Spain, and Sweden. Slovak team represents Forecasting Institute of Slovak Academy of Sciences.

YMOBILITY is research program which addresses the following:

- Identifying and quantifying the main types of international youth mobility in the EU, and their key characteristics. Particular attention will be given to differences between and within three main types: highly skilled, less skilled and students.
- Understanding what determines which individuals do and which do not participate in international mobility as personal and professional development strategies: their motives, migration channels and information sources.
- Analyzing the individual outcomes in terms of both employability and career (skills and competences) and non-economic terms (welfare and identities).
- Analyzing the territorial outcomes for the regions of both origin and destination, in economic, demographic and cultural terms.
- Differentiating between short-term and long-term outcomes, taking into account return migration and future intentions to migrate.
- Identifying implications for policies in migration but also for education, the economy and housing.

The research will utilize existing secondary data for the whole EU, but will mainly rely on primary quantitative data (large-scale surveys to be undertaken by polling agency) and qualitative data (interviews with migrants and returned migrants)

Kick off meeting "Ymobility" was held in Rome (Italy) on 23.-24. April, 2015. Meeting was organized by Sapienza University of Rome, who is also the chief coordinator of the project. At the meeting were presented the working practices and the role of the individual project partners. We address the following topics:

- Youth mobility: definitions and typologies (Russel King – Great Britain, Sussex)
- Youth mobility: definition of research methodologies and data collection (Allan Williams – Great Britain, Surrey, Vladimír Baláž – Slovakia)

- Information sources, channels, motivations and risks (Dumitru Sandu – Romania)
- Youth mobility – individual, economic and social outcomes: skills and competences, welfare, social identity (Henrik Emilsson – Sweden)
- Youth mobility: territorial outcomes (Pablo Pumares Fernandez – Spain)
- Youth mobility – towards the future: intentions, scenarios and simulations (Armando Montanari - Italy)
- Youth mobility – towards the future: policy recommendations (Thomas Faist-Germany)
- Project management (Riccardo Carelli – Italy)
- Setting up of the Steering Committee (all participants of project)
- Scientific Coordination Team Meeting (all participants of project)
- Planning the activities for the first six months (all participants of project)
- Next project meeting (all participants of project)

The Slovak team presented topic The Innovative experimental research methods. The main task of the Slovak team is to create new software for the experimental method - Mouselab, on the basis of which the data will be collected in all countries. After extensive discussions, the schedule and tasks of each partner for whole 3 years project period were settled. It was agreed that the next meeting will be from 20 to 21 July in Riga.

Filip Gulan

AESOP YOUNG ACADEMICS SUMMER SCHOOL 2015 IN STARÁ LESNÁ, SK AESOP 2015 CONGRESS IN PRAGUE, CZ

In July 2015, Slovakia and Czech Republic hosted two successful events of the AESOP (Association of European Schools of Planning) that were concentrated on current research challenges in planning.

The 2015 AESOP PhD workshop organised by CE SPECTRA – Centre of Excellence of the Institute of Management of the Slovak University of Technology and the Institute of Forest Ecology of the Slovak Academy of Sciences in Bratislava in association with the AESOP Young Academics was held from Monday 6th to Saturday 11th July 2015 in Stará Lesná, Slovakia. PhD workshop „Fuzzy Responsibility - Multi-actors Decision Making under Uncertainty and Global Changes" was structured into several study modules in small groups together with plenary sessions and presentations from several academic tutors, namely: Susan Baker (Cardiff University), Benjamin Davy (TU University Dortmund), Izabela Mironowicz (Wroclaw University of Technology), Paulo Silva (University of Aveiro), Jiřina Jílková (University of J. E. Purkyne, Usti nad Labem), Maroš Finka (Spectra CE, Institute of Management at Slovak University of Technology in Bratislava) and Tatiana Kluvánková (CE SPECTRA, Comenius University), and guest speakers Evelyn Gustedt (ARL), Michal V. Marek (CzechGlobe) and Eva Streberova (CE Spectra). More than thirty PhD. students, including nine PhD. candidates from CE Spectra, presented and shared their research proposals, ideas and experiences in an multidisciplinary environment, in particular focused on:

- Spatio-structural, temporal, functional and conceptual dimensions of softness and fuzziness in spatial development
- Growing uncertainty in decision making
- Multi actors decision making
- Governance as a cultural phenomenon (diverse)
- Perspective for fuzzy soft polycentric governance for soft and fuzzy spaces

Active participation of PhD students, networking, in-depth workshops in small groups coupled with tutors´ interventions were focused on current challenges in thematic orientation of the workshop as well as aimed to

contribute to the optimisation of research methodology. One of the most valuable experiences were „Behavioral experiments“ sessions led by the team of CE Spectra, where participants learnt useful lessons on different aspects of the growing uncertainty in decision making related to the management of natural resources. Another highlight of the workshop was the interactive „Participation – Yes or No?“ course led by professor Susan Baker, which brought up a very broad discussion on the myths, limits, pros and cons of the public participation processes in decision making.

Presentation from Nadia Caruso about the AESOP Young Academics (YA) encouraged PhD candidates to be active within the YA network and discussed potential opportunities and objectives of this challenging environment. In the context of AESOP Young Academics, the 2015 workshop-summer school has contributed to the development of the network of young academics and, as we hope, enabled to create new professional relationships among the participants. The workshop was rounded off with an interesting site visit of two protected areas, historic town of Levoča inscribed in on the UNESCO World Heritage List and Spišská Sobota in Poprad.

The PhD workshop has preceded an annual AESOP Congress that was held from Monday 13th to Thursday 17th July in Prague, Czech Republic. AESOP congress is a wide platform of exchange in the fields of research, education and practice in planning. According to its intriguing title “Definite space – fuzzy responsibility”, the gap between sprawled powers, potency and blurred sense of responsibility was the focus of the congress debates while attempting to address one of the core questions: who should take responsibility for how cities and regions are being changed? The possible answers were discussed in

19 different tracks, roundtables and social events with many outstanding presentations and keynote speakers, such as Peter Mehlbye, Erik Swyngedouw and Iván Tosics. Professor Maroš Finka from CE Spectra was also one of the co-chairs of „Complexity, Planning and Fuzzy Responsibilities” track, as well as “EU-HORIZON 2020 - INSPIRATION: INtegrated Spatial Planning, land use and soil management Research ActTION” roundtable session. CE Spectra PhD. students took an active part in the Congress, presenting their research both orally and from posters. We are pleased to announce the success of our colleague Stefan Telle (RegPol, STU) in the competition for the AESOP Best Conference Paper 2015 with his paper called „European Union Cohesion Policy and the (Re-) Production of Centrality and Peripherality through Soft Spaces with Fuzzy Boundaries“, which was among the seven awarded papers.

Almost two AESOP weeks full of knowledge sharing and networking sparked many new thoughts and ideas and provided an invaluable opportunity for researchers in planning to think about the implications for their work of the changes in governance and planning which have been both a spur for, and object of, their academic work.

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Next Issue:
The next issue of journal TERRA SPECTRA Planning Studies no. 2/2015 will be devoted to the research in real estate management.

Central European Journal of Spatial and Landscape Planning

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