LANDSCAPE TRANSFORMATIONS OF THE POST-COMMUNIST COUNTRIES
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Landscape transformations of the post-communist countries:
an international interdisciplinary student conference, Prague 17-18 October 2013

supported by SVK ČVUT – SVK 38/13/F5

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design and composition by Martina Sarvašová, Kristýna Stará
front and back cover by Martina Sarvašová, Kristýna Stará
published, printed and bound by CTU in Prague, Česká technika - nakladatelství ČVUT, Thákurova 1, 160 41 Praha 6

Chapters have undergone limited editorial change, have not been reviewed by an outside group and represent the views of the individual authors. Unless otherwise stated, authors of visual documentation are authors of articles.
All revised abstracts submitted in written form by September 20, 2013 were published in printed and downloadable format together with keynote speeches in reviewed conference proceedings and on the conference website.

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ISBN 978-80-01-05431-4
Shaping spaces around us is a lifelong challenge. This process diver from neighborhood to neighborhood; city to city; country to country and even continent to continent. The reason for conference called landscape transformations was to open a dialogue between professions that are recently involved in this global space change. The topic was narrowed to European post-communist countries which had to deal with new challenges of landscape development, transitions or degradation. Our goals were first to present and discuss recent knowledge and findings of various student projects and thesis. Second, increase collaboration and information exchange between professions that has landscape as a common ground and third to develop a trans-disciplinary framework of cause and effect relationships that influence landscape stability and sustainability for the future.

We listed over 130 email addresses of professional and educational institutions in 15 European countries and received responses from 10 (Czech Republic, Netherlands, Macedonia, Poland, Austria, Croatia, Latvia, Slovakia, Albania, and Hungary). From all received abstracts we formulated six thematic topics which were policy and technology, cultural landscape, theory, public spaces, regeneration and public riverfronts. The conference took place at the Czech Chamber of Architects in Prague and lasted for three days in October 17th to 19th, 2013. We would like to thank all speakers for their participation, great energy and willingness to discuss all identified issues and we hope to continue with this topic in larger context in following years.

Martina Sarvašová
Summary

Prologue
Martina Sarvašová
005

Introduction
Martina Sarvašová
009

Policy and Technology

Intro
Henry Hanson
011

Landscape Diversity Modelling on Geographic Analogue Sites in Central Europe
Gyöző Fülöp
012

From Decentralization to Participation.
Evolution and Challenges for Public Involvement in Post-Communist Countries
Katarzyna Piskorek
018

Modern Methods of Diagnosing and Predicting Changes in Spatial-Functional Structure of a City.
New Infrastructure and Degraded Areas in Wroclaw
Jan Barski
022

Cultural Landscape
Conrad Armstrong
031

Drivers of Agricultural Abandonment: Case Study from the Šumava Mountains, Czech Republic
Jitka Straková, Veronika Gaube, Peter Verburg, Stanislav Grill, Keith Edwards
032

Historical Transformation of Latgale Church Landscape
Madara Marková
042

Effects of Globalization and Historic Events on Landscape Character of Czech-Austrian Borderland
Jan Richter, Henry W.A. Hanson, Matthew Potteiger
050

Rural Landscape Transformations by the Example of the Village Tyrdolovce in Slovakia
Attila Tóth
054

Theory

Intro
Alexander Stipsits
061

Urban Project in Riga’s Public Space: Behind the Curtain of Rational Decision
Helena Gutmane, Jan Schreurs, Peteris Skirling
062

Transformation and Perception
Kristýna Stará
070

Landscape Architecture as a Profession
Martina Sarvašová
078

Introduction
Martina Sarvašová
087

Public Spaces
Why Do We Need to Transform Urban Planners into Vision Builders?
Pavel Borecký
Ways of Development of Small Urban Spaces in Wroclaw
Gierko Aleksandra
Using Sculpture, Principle of Common Links Between Art and Park
Katarzyna Despok, Vaska Sandeva
Status, Problems and Trends to Address Green Space in Skopje, Macedonia
Vaska Sandeva, Katarzyna Despok
Urban Permeability: On Plants and Plinths
Veronika Kovácsová
Public Will Versus Development Pressure in Urban Landscape Transformations: Case Study Nové Žámky
Tomáš Pavela, Attila Tóth
089

Regeneration
Urban Transformation, Pittsburgh
Henry Hanson
Sustainable Retail Mall Redevelopment
Wojciech Spyrka, Wójcić Jerzy
Role of Railway in a Transformation of Cities: Case Study of Smíchov, Prague
Kateřina Čechová
Industrial Heritage Landscapes Comparative Study: Schio (Italy) versus Nové Město pod Smrkem
(Czech Republic)
Tereza Vokurková
099

Public Riverfronts
Rijeka: Many Challenges of a Waterfront Transformation
Sara Stojaković
Open Space Utilisation of Danube Inner-City Watersides in Vienna, Budapest and Belgrade
Ivana Andrić-Dulić
Comparing Two Examples of Albanian Industrial Heritage Sites Along Urban Rivers
Artën Hysa
The Vistula Riverfront in Warsaw, Poland: Nature and Public Needs
Małgorzata Okołotowicz, Magdalena Budyta, Marta Warmińska
110

Notes
200
Theory, in many cases, sets the base for further development in practice. In the past, some of the applied theoretical models succeeded, some failed. Theory has the freedom to be critical, provocative, ask questions and search for answers based on the information pool which is surrounding us nowadays in this dynamic, changing and restless world.

First conference day was divided to three blocks (Policy and Technology, Cultural Landscape, Theory) with two keynote lectures. All papers were using theoretical models searching for their application in real conditions. Identified issues were the lack of interest from inhabitants and their municipalities, lack of combination of hard and soft data in scientific field and lack of applicable theories. To improve this situation is to start at the local level with initial changes and open dialogue with local municipalities. The bottom up process proved to be successful in some examples.

Martina Sarvašová
Reflecting on the forces behind change in the landscape of post-communist countries, it is clear that policy plays a significant and direct role. For example, the top-down economic policies of communist regimes were the foundation of planning and development, including city planning and collective agriculture. As a result of the period of communism, the role of the individual and the community through democratic process dissolved under the weight of central control. Policy continues to significantly influence land development at a wide variety of scales and through the full range of contexts, from urban to national parks. For example, continuing with the agricultural example of collective farming, the current EU CAP subsidies are a primary force in determining the way agricultural land is used. Although often overlooked, the effects of policy on the local ecological, social and cultural setting is fundamental. The policies that form this foundation are at the national or EU scale and are often dealt to the wide range of local effects. By looking at policy through all of these lenses together we hope to improve our understanding of these interrelationships; and, more importantly, consider them when discussing potential policy reform and the method for accomplishing it.

As we all know, technology has been changing the world with remarkable speed, the way we perceive, understand and use it. The tools and data that we have today seem destined to continue to multiply in the immediate future. How does this rapidly changing technological environment affect our landscape? Through the way we use the land, through the way we manage land, the way we explore opportunities for the future?

The following presentations start to explore the topics of Policy and Technology and their effects on landscape. With these initial presentations we should be able to start a critical discussion about the future of our relationship with the land and the way in which policy and technology are tools to grow a sustainable relationship with our beloved lands.

Henry Hanson

Policy and Technology
Landscape Diversity Modelling on Geographic Analogue Sites in Central Europe

György Fülöp

Abstract
Landscape diversity is one of the most global values of landscapes. The aim of my research was to examine if climate change has an impact on this value, and if yes, how this impact can be described objectively. Besides the post-communist cultural changes, environmental changes have also significant impact on the perception of landscapes in Central Europe, where besides the political restructuring at the end of the XX. century, global environmental changes (climate change) can be foreseen to have the greatest impact at the end of the XXI. century. To exclude harmful synergies between cultural and natural shifts, tendencies affecting landscapes must be drawn up.

Geographic analogue sites are regions on the Earth surface, which have similar climate conditions (in different time periods), if we calculate with the effect of different climate scenarios. The study was prepared in five geographic analogue regions in Central-Eastern Europe on NUTS-2 level. In the study, spatial statistical information was provided about the perception of landscape diversity with the use of LANDSAT TM satellite imagery. The set up automated methodology (INLAND), which mines numeric information from remote sensing imagery, first defines diversity patches in the function of perception-resolution. The diversity patch structure was analysed in the function of the perception resolution, and geographically analogue regions were described with four resulted parameters: initial quantity of perceived landscape diversity (IQ), sensitivity of quantity perception (SQ), initial perceived diversity patch size (IS) and sensitivity of size perception (SS).

INTRODUCTION
Modelling landscape diversity: Challenges to be solved with INLAND
Landscapes must be defined, assessed and monitored (European Landscape Convention, 2000, Florence). Assessment and monitoring intentions assume objective description of landscapes’ manifestation. One of the most global characteristics of landscapes is their diversity. Landscapes are “a mosaic of heterogeneous land forms, vegetation types, and land uses” (Urban et al., 1987) – heterogeneity is even a defining value of landscapes.

What is the difference between heterogeneity and diversity? Landscape, as a phenomenon, is an “anthropo-socio centric” concept (Mőcsényi, 1968), which means that our approach to landscapes is naturally considered from the viewpoint of our society. Heterogeneity is an only-natural factor of landscapes, while “the Landscape is a complex entity, developing in the interaction of nature and society” (Cserecz, 1996; translation by the author). Heterogeneity must be understood/recognised felt by the society, to let us speak about landscape diversity. This process of understanding is perception. Perception is the difference between heterogeneity and diversity. The term “Landscape Diversity” (LD) is used in the confines of this paper as: perception of spatial structural heterogeneity.

Spatial heterogeneity, thus landscape diversity is a global value of landscapes. However, landscapes have no specific scale: the landscape is a cross-scale concept. Spatial heterogeneity and landscape diversity are also phenomena, which are continuous through all scales. “Spatial heterogeneity is ubiquitous across all scales and forms the fundamental basis of the structure and functioning of landscapes, be they natural or cultural” (Wu, 2004).

According to the definitions above, there are two main challenges of modelling landscape diversity: (1) the modelling methodology must be able to describe landscape diversity through spatial scales; and (2) and have to model landscape diversity as the perception as spatial heterogeneity. While spatial heterogeneity is a research focus of landscape ecology, there are no parameters of landscape diversity. While the effect of spatial scale is a research focus of GIS (geographic information systems) and Image Information Mining, there are no operative solutions of data mining to handle scale-continuous landscape analysis.

INLAND (Interscale Landscape Diversity Modelling Methodology) (Fülöp 2013) introduces an automated sampling solution, which handles “cross-scale” and “perception” problems in an integrated way, when modelling Landscape Diversity according to the input data of Multispectral Earth Observation (satellite remote sensing) imagery. These datasets can provide opportunity for mass-data mining in a homogeneous quality and describe land-cover relations of landscapes.

Target of the research: Climate change impacts on landscape diversity
Geographic analogue sites are regions on the Earth surface, which have similar climate conditions (in different time periods), if we calculate with the effect of different climate scenarios. Gaal and Horváth (2006) and Horváth (2008) defined five geographic analogue regions in Eastern Europe (post-communist countries) on NUTS-2 level (Fig 1), with higher than 90% probability. In these regions, within the confines of the recent study, spatial statistical information was provided about the perception of landscape diversity of these regions with the use of LANDSAT TM input satellite imagery and INLAND sampling solution.

The study targets on the extraction of tendencies between the landscape diversity characteristics of the analogue regions in order to assess the effects of climate change on landscape diversity. The assessment of landscape transformations in the post communist countries must focus on both cultural and environmental factors of landscape changing. This study aims to draw up the tendencies of changing landscape diversity in order to support the whole picture of landscape transformation in the post-communist countries.
In the confines of this paper INLAND solutions can not be explained in details. However, a short description must be done, in order to support the better understanding of the application results.

INLAND sampling solution defines diversity patches and measures their number and their size. INALND defines these diversity patches by extracting them across sub-scales of a landscape image. The algorithm of INLAND decides in a given subscale, whether a raster is different from its environment or not. If it is different, then it is considered to be a diversity patch. If it is not different, then the raster is re-analysed in the next (higher resolution) subscale. The decision-making on diversity is based on the differences of the initial image pixel means covered by a given subscale raster. The difference of means is measured to the standard deviation: when it is bigger, then the diversity is existing, and the subscale raster is decided to be a diversity patch.

The algorithm of INLAND is executing the sequence of decision making through subscales, integrated into the sequence of perception resolution. The INLAND sampling solution measures in the relation of perception resolution the total area (number of pixels, NP) and the mean patch size (MPS) of diversity patches that can be calculated. The curves which can be drawn up from NP and MPS values in relation of the sub-scales are extracted four objective parameters, describing the landscape diversity:

• Initial quantity of perceived LD (IQ). This quantity describes directly the quantity of diversity when assuming, that perception is possible in the whole sampled area at the first sight. IQ describes how intense LD is for the perceiver at the first sight.

• Sensitivity of quantity perception (SQ). Assuming that perception resolution is convertible into time quantity required for LD perception, SQ describes how perceived diversity patch size is growing in time (in S-model b4 is the intensity, with which the population is decreasing due to lethal disease). SS models the dependence of total space perception on time consumption. SS describes, how diversity patches will be bigger if perception has time duration (regional differences are harder perceived than local differences).

• Sensitivity of size perception (SS). Assuming that perception resolution is convertible into required time for LD perception, SS describes how perceived diversity patch size is growing in time (in S-model b4 is the intensity, with which the population is decreasing due to lethal disease). SS describes, how diversity patches will be bigger if perception has time duration (regional differences are harder perceived than local differences).

IQ, SQ, IS and SS are parameters, which describe landscape diversity objectively. In the research these parameters were used to describe geographical analogue regions’ landscape diversity after representative sampling. Then the differences between the regions were analysed with spatial statistical methods.

TEST SET UP

To gain IQ, SQ, IS and SS landscape diversity parameters of the geographic analogue regions (Fig. 1), multispectral (MS; R-red, G-green, B-blue, N-near infrared) LANDSAT TM imagery were acquired (30 m resolution) in the June-July periods of 2009-2011. From the satellite image area Fig. 2 Initial quantity of landscape diversity (IQ), sensitivity of LD quantity (SQ), initial LD patch size (IS) and sensitivity of size (SS) parameters in geographic analogue regions.
the regions with higher than 0.4 NDVI (Normalized Difference Vegetation Index) values, urban areas and higher slope than the Hungarian test region were excluded. From the remaining area of interest, by random sampling 35-35 128 pixel extent samples were gathered from each geographic analogue region. These samples were analysed with INLAND sampling solution, and IQ, SQ, IS and SS parameters were calculated.

In the followings of the statistical analysis of these parameters will be explained.

**SPATIAL STATISTICAL RESULTS**

The first step analysis of the landscape diversity parameter dataset of the geographic analogue sites was to examine whether the samples are homogeneous within each regions. As the K-means cluster analyses detected, in each region there can be two clusters of the samples defined. In Figure 3 these clusters are introduced with the 3 best examples: a, is three cluster members from Cluster 1 from PL12-PL31-PL61 region; b, is the best three cluster members from the Cluster 2 from the same region; c, is three Cluster 1 members from PL11-PL41-PL43 region; d, is three Cluster 2 members from the same region etc.

In the definition of the two clusters only SQ and IS values were participating significantly. However, Cluster 1 in each region can be described with lower IQ and IS, while higher SQ and SS values. Cluster 2 in each region can be described with higher IQ and IS values, while lower SQ and SS values. It means, that in Cluster 1 the initial quantity and size is smaller, however the landscape is more sensitive for the quality of the perceiver. In Cluster 2 the initial quantity and the size is higher, however, with time consumption this value changes less. In case of significant SQ and IS factors the comparison of means will be done in the next steps regarding Cluster 1 and Cluster 2 differences.

To compare the means of landscape diversity parameters in the analogue regions, ANOVA analysis was carried out (after the comparison of standard deviations with Bartlett-test and the checking of normality with Kolmogorov-Smirnov test). The test showed, that between the regions IQ and SS parameters did not show significant differences, while SQ and IS parameters have significantly different values in the analogue regions. In Figure 2 the landscape diversity parameter values of the regions are explained. With the help of Tukey’s and Sheffe’s Post-Hoc test it is indicated whether the differences between regions are significant (SL=0,05) (green line) or not significant (red line). In case of SQ and IS the two formed clusters were analysed separately.

In the followings of the statistical analysis of these parameters will be explained.

**DISCUSSION**

Climate change has a significant effect on landscape diversity. This research aimed the estimation of landscape diversity changes in Central-Eastern Europe with the use of INLAND sampling solution. The followings can be stated with the use of the research results:

1. Climate change has a significant effect on SQ and IS parameters (sensitivity of LD quantity and initial diversity patch size.)

2. In Central-Eastern Europe the used samples (from agricultural landscapes) show a differentiation along IQ and IS parameters. One group (cluster) can be described with low IQ and IS values but high sensitivity values (SQ and SS), while the other group is of high IQ and IS and low SQ and SS values.

3. Due to the effects of climate change SQ values are decreasing, while IS values are increasing. The landscape of the geographic analogue region (BG42, EL12) has significantly different LD parameters (outlying from tendencies), because of different agricultural system (irrigation).

4. The RO31, RO41, BG31, BG32 region faces recently a need of changing agricultural system, while in HU32 this change will be essential in 25 years. Rural policy must support the efficient adaptation to climate change.

5. IQ and SS parameters also show tendencies, even though they are not significant (at SL=0.05).

**References**


**Acknowledgement**

I thank the support of Deutsche Bundesstiftung Umwelt, and the inspiration of consultations with Dr. Júlia Barabásné Martos, Prof. Holger Behm and Péter Torma.
From Decentralization to Participation. Evolution and Challenges for Public Involvement in Post-Communist Countries.

Katarzyna Piskorek

Abstract
The transformation that happened in Eastern European countries after the abrupt collapse of communist regimes in 1989 had an enormous impact on their development. The big turn from government-planned economy into egalitarian social relations had significant influence on spatial planning. The immediate change from strongly centralized planning to decentralized public ventures made the new governments as well as local authorities face completely new challenges. On the one hand, they could learn a lot from Western European countries and use some of their experiences, but on the other hand they needed to develop their own systems and management. After nearly 25 years, there are already some achievements and still some challenges left in this matter.

INTRODUCTION
After the II World War, European countries rehabilitated and evolved on different principles. The eastern part of Europe was included in the Soviet sphere of influence and introduced communist regimes, which conditioned its development for over forty years. The abrupt collapse of communist regimes and disintegration of the Soviet Union began the turbulent shift period. The transformation, universally counted from 1989, has been one the most dramatic transitions around the world in the last twenty-five years. Former communist countries had to face new political, economic and social reality, which in the first years caused a crisis often considered deeper than the Deep Crisis of 1930s [Hirt, Stanilov 2009]. The life of transition countries’ citizens, who used to be subordinate to totalitarian regimes and moved on decent housing, employment, health care and many public amenities, suddenly came to the point in the midst of open or closed wars, political instability and hyper-inflation. The big turn from government-planned economy into egalitarian social relations had significant influence on spatial planning, which used to be strongly centralized. The decisions, funding, management, and even design used to dependent on the central government. The state with the public funds was regulating and initiating all spatial ventures and projects even at the very local scale. The immediate change from strongly centralized planning to decentralized planning made the new governments as well as local authorities face completely new challenges and triggered a brutal adjustment to the capitalistic rules.

One of the issues regarding governance in the transformed reality was public involvement and public participation. The decision-making power of citizens and local communities was something that did not officially exist before the transformation. The government was responding to the citizens’ needs based on models and arbitrary estimations, without public consultations. After the decentralization, spatial planning started to happen at the local level and citizens’ involvement was not only allowed but also desired and was introduced into new legal basis of post-communist countries.

Nowadays, all European former communist countries are facing similar problems related to widely understood development. On the one hand, post-communist countries can learn a lot from Western European countries’ experiences, but on the other hand they need to develop their own systems and management. The nearly 25-year transformation period has brought about some crucial and obvious improvements, but nevertheless there is still a big motivation.
which all sides are interested in creation of plans, strategies, policy execution, and decision-making processes and are willing to gather and share information. Involvement of participants can be passive. Both of the above-mentioned concepts are crucial in conscious contribution in spatial planning processes.

CHALLENGES FOR EUROPEAN PUBLIC PARTICIPATION

In all European countries, public participation is facing numerous and varied challenges. The biggest dissimilarities are noticeable between Eastern (post-communist) and Western countries. The cited examples serve to display how different the challenges may be and how clearly it is related to the development level of democracy.

In countries that were not going through over forty years of communist regime, the issue of public involvement and participation is more about how to improve and optimise it. Citizenship skills are being taught in kindergartens and primary schools to develop a habit of being interested in urban and space transformation issues (Ireland). The language used in spatial planning documents is “translated” into more common language to make it more understandable for citizens (Finland). New technologies are used to connect citizens and authorities and for open debates on urban issues (Denmark). Local societies are involved in designing processes to express and highlight their association with the area they are living in (France). The surveys on citizens’ needs are made by authorities to support the decision-making process about the use of city space (The Netherlands). All these actions undertaken in Western countries, where democracy is more mature, have more complex aims and are supposed to lead to advancements and further development. The tradition, habits and the awareness of citizens’ rights and duties are already established.

During the same time, the Eastern European countries have been struggling with communist heritage that is still sensible in the mentality of citizens. When democratic countries were developing local societies cooperating with local authorities and belief in common good, in the former Soviet bloc the state was regulating and imposing the way of life. That is one of the reasons why there is still so much distrust for the authorities and little confidence in public activities. Trying to adjust to European Union requirements, post-communist countries are facing more basic and fundamental problems with public participation and public involvement. The challenge is how to make people interested and engaged in spatial planning ventures with the minimal risk of open conflict – therefore how to stimulate and manage public activity itself. A significant question is also how to develop local societies and make citizens associate themselves with the space they are living in? Then, how to minimise the conflicts and how to establish a dialogue between citizens and local authorities? It is evident that post-communist countries, due to their history, differ from the rest of Europe in many aspects related to public activities. This may lead to the conclusion that public participation is related to the advancement of the democratic system in each country. The consequences of over forty years of detachment and development under the totalitarian regime left them far behind the rest of Europe and cause difficulties even nearly twenty-five years after the transformation.

CONCLUSIONS

Post-communist countries’ experience in public involvement started to develop quite late in comparison to Western European countries. After almost twenty-five years of redeveloping urban planning systems in Eastern European countries, there are still visible differences between them and the rest of Europe. Big dissimilarities might be noticed in local societies and citizenship skills development. The space (The Netherlands). All these actions undertaken in Western countries, where democracy is more mature, have more complex aims and are supposed to lead to advancements and further development. The tradition, habits and the awareness of citizens’ rights and duties are already established.

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Jan Barski

Abstract

Wrocław belongs to the group of Central European cities which have experienced extraordinarily intensive growth and development since the transformation of 1989-1990 in general, and in particular since the opening of the various European Union financial support mechanisms (starting in 2000, with leaps in funding in 2004 and 2007). The most recent and probably most significant push happened prior to and during the year 2012, when Wrocław hosted the European Football Championship Cup games. A number of infrastructural projects have been completed and have started to influence the everyday life of the citizens.

The paper offers an outlook of two spectres of research undertaken on the Wrocław University of Technology involving modern software, such as modelling tools and GIS software. The first described study concerns a modelling (simulation) of impact the so-called Western Pole might have on the spatial-functional structure of Wrocław. The study uses the intervening opportunities model to look for possible shifts in travels to services in the agglomeration of Wrocław (study area of ca. 3000 km² and 1 mln inhabitants) due to the introduction of the motorway bypass and future (potential) services concentration in the previously empty area. The study serves to present the tools available to predict general tendencies in spatial changes of cities or regions.

The second part of the paper focuses on research conducted with the use of GIS software and touches on the problem of the so-called degraded areas. Wrocław, similarly to plenty of other cities of this part of Europe, has been subject to radical and sudden changes in value, prestige and usefulness of various pieces of land; in the perspective of 25 years, many areas of prominence have been downgraded to backsides, and whole tracks of land have been developed from scratch to serve new purposes. The study, often offering other terms, such as “obsolete” or “out-of-date” areas, presents data collected on Wrocław’s degraded land, categorizes it and goes as far as to try mathematically estimate chances for re-use of these areas.

Keywords | Key phrases
Wrocław, spatial-functional structure, modelling tools, simulation tools, GIS software, spatial changes predictions

INTRODUCTION

The dynamic processes of transformation, to which cities of post-communist countries are subject to, pose a great challenge for any person or body trying to keep track of or categorize them, let alone manage them. These processes derive from a multitude of factors, spanning from the economic sphere, through politics of all levels, to social characteristics of societies. Their results, similarly, can be seen in all aspects of life, and one of the most obvious aspects are changes in space. One can argue that the way the space of a place changes reflects what is really happening there better than what is being written by journalists and analysts, and maybe even better than in statistics as well. Even if such claim is exaggerated, changes in space are very serviceable – as they are visible and material – indicators of general tendencies of transformations that a society is going through.

Measuring such changes is very difficult, but still not as much predicting them. Despite the challenges, attempts to do so are continued among various groups of academic, public and commercial specialists. In Wrocław, the topic has been tackled by a couple of bodies, including researchers from the Wrocław University of Technology.

The city of Wrocław has seen as much turmoil as any city in Central and Eastern Europe, and very recently it has experienced some extraordinary history. On top of all investments that had been happening due to the presence of European Union’s developmental support (since 2000, with great increases in funding in 2004 and 2007), in 2012 Wrocław hosted three matches of the European Football Championship Cup. Due to this major event, Poland has experienced a surge in private investments, such as construction of new shopping centres, major railway stations, to name only those financed by the public sector; a plethora of other investments were made by the private sector, most notably in the accommodation business. The building activities were naturally concentrated in the host cities. Wrocław has been fitted with a number of new and refurbished infrastructure of all kinds, such as the long-awaited motorway bypass (highlighted by a unique bridge), much-needed new airport terminal, a new stadium or a renovated historic main train station. This paper focuses on an area which has been “created” by these investments, namely the Western Pole. This area, previously of no significance and characteristic, may become a weight that will change the structural-functional structure of the city and its agglomeration. The first part of the following text presents a short study on how such change might look like and how the intervening opportunities model can be used to at least roughly predict the possible changes.

The second part of the paper brings into attention another very interesting and equally important challenge faced by most cities in the world, and on top of the list by cities of post-communist countries: the phenomenon of much turnover in functions (uses) of spaces. The economies of post-communist countries first experienced a revolution of political and economic switch from full, and often stifling, control of the government to the freedom, often chaotic, of the free market; since then, for nearly 25 years and counting, they have been adjusting to the new reality. Obviously, since anything that happens (outside of the human mind) happens in space, the space has been changing and adjusting along with all other aspects of life. The products of the last quarter of a century are multiple areas that have lost their original function and have not gained a new one, areas that have preserved their function, but its relevance has dropped significantly, or areas that have experienced many other types of problematic transformation. Frequently, the adjective “degraded” is used to describe such areas; this paper offers another one to broaden the spectrum of discussion, namely “outdated”, in order to include situations where the material tissue has not necessarily deteriorated, but the function of the area (or activity) has lost its importance. Also, an outlook of research on outdated areas in Wrocław is presented.

MODELLING THE POSSIBLE GROWTH OF THE WESTERN POLE. INTERVENING OPPORTUNITIES MODEL

The intervening opportunities theory states that the number of people travelling a given distance is directly proportional to the number of opportunities at that distance and inversely proportional to the number of intervening opportunities, that is, the number of chances of finding sat...
isfaction in work or residence, for example, which may be encountered along the journey” (Husain 2010). To clarify further, one can say that an intervening opportunity is a nearer opportunity that makes a farther away one less appealing for the travel-maker (the traveler). In other words, the probability of ending a journey earlier than originally planned depends primarily on the number and quality of opportunities the travel-maker encounters on their way, and only secondarily on the distance and cost of the journey.

The intervening opportunities model is a simulation tool which allows for estimation of flows of travels between given origins and destinations. The model distributes flows from origins to destinations based on an ordinal ranking of the destinations, where the attractiveness of a place does not fall off gradually with distance, but by the number and attractiveness of intervening opportunities a travel-maker passes to get to a particular (original) destination. The model assumes values for origins (most commonly the population base for a given area) and destinations (usually the absorptivity of an area), but at the same time enables manipulations if needed, such as limiting or extending these two values. The necessity of this model is the selectivity parameter. It describes the density of probability of accepting a destination by the travel-maker or, in other words, the extent to which the travel-maker is ‘choosy’. This variable is also open for modification if needed, as the travel- ers can be made easier or harder to satisfy. The higher the level of specialization (advancement) of the purpose of a travel, the lower the probability of satisfying this demand at any point during the travel. The intervening opportunities model is probabilistic and simulates the distribution of travels from a given source (origin), aiming for various targets located within a given space (area) (Chądzyńska 2010). Finally, such simulation requires a network of connections over which the travels will be made; it is most frequently rendered with a real-life network of roads or roads and rail- ways, etc. All of the above can be extended, advanced, and complicated depending on the complexity and depth of desired analysis.

In the exercise study presented in this paper, the developed area was the Wrocław Agglomeration, a region of roughly one million inhabitants, spanning over 3000 km² [fig. 1]. A projection of the layout of the area, road network, and population location was necessary as input data of the modeling. For the study, the area was divided into 348 districts, based on actual administrative divisions; each district was allocated its real number of inhabitants. Due to the great difference in population density between Wrocław and the surrounding areas, the city has been divided into districts in a much more precise way (310 units out of the 348) [fig. 2]. The road network (as of October 2012) took into account the roads’ class, category, and location in order to reflect average speeds at subsequent road sections [fig. 3]. Each district was represented by one potential-point on the road network with the number of inhabitants ascribed to it; the location of the potential-points reflected the real location of the main administrative settlements of a given district (outside the city) or a major transportation node (inside the city).

Wrocław is a city with a clearly dominant centre— the Old Town historic core. The historic centre’s all-around leadership is obvious and not to be changed, however the local authorities have been planning to possibly ‘outsourse’ some activities further away from the middle of the city. One such concentration exists and has been developing since a couple of years into the new, capitalist era—a very extensive retail and wholesale shopping area on the southern edge of the city, sprawled around the junction of five major routes of continental (A4 motorway, part of the III Pan-European Corridor, Paris-Kiev) and national (four national roads) importance. It has a few more or less official names, however in municipal and partly in academic nomenclature it is called the Southern Pole. Finally, the aforementioned node of the stadium, motorway (A18) bypass, new train station and city mass transit stops was, consistently, called the Western Pole [fig. 4]. It is planned as one of three major concentration areas of services in Wrocław, which would include a major shopping centre, as well as housing, and leisure and entertainment facilities.

In this study, the aim was to confront these three significant areas of concentration of services therefore, only the three centres (poles) have been marked as destinations for the travel-makers in the simulations, meaning that only in these three places journeys could end. The origins have been preserved with real-life values and placement.

For the first simulation, all three poles were given the possibility to absorb up to 100% of the travels with no diversification or preferential treatment. During the first set of simulations (sim. A-I, fig. 5), the city centre gathered all travels; that led to the first and basic conclusion that the position of the historic centre is thoroughly dominant not only in the perspective of Wrocław, but also its nearest region. It was clearly visible that due to the location and the distribution of inhabitants, Wrocław city centre is the strongest attractor in the whole Agglomeration system. For the second set of simulations, the selectivity parameter was manually modified to make the travel-makers less choosy; in it, the Southern and Western poles took away close to forty percent of the city centre’s previous value, and the Western Pole had a slight advantage over the Southern Pole (sim. A-II, fig. 5).
For Simulation B, the central pole was limited in order to force a development of concentrations in the two remaining poles. First, the bar was set at 1/3 of all possible travels as the maximum for the city centre. In the next variant, the city centre was blocked out completely in order to confront the two remaining poles. First, the bar was set at 1/3 of all possible travels as the maximum for the city centre. In the next variant, the city centre was blocked out completely in order to confront the two remaining poles. Finally, in order to clearly confront the two poles, the central one eliminated entirely, and the travel-makers only had the remaining two destinations as alternatives. Here, the simulation showed a larger advantage of the Western Pole (sim. B-II, fig. 6).

The conclusions that can be drawn from this extremely basic simulation exercise is, first of all, that the Wrocław city centre dominates strongly due to its central location, high population density and the convenient accessibility in the road network. Of course, the actual use of the potential of the Western Pole, as well as its further development, is still a major challenge and a question mark. Moreover, it is hard to argue that the completion of the motorway bypass will be a game-changer in the circulation of the region, and should be viewed as an achievement of the city and the region on their way to fulfil long-term strategic aims.

As every model, the presented exercise serves to analyse a limited fraction of real-life situation (much data is rounded or estimated), therefore the simulation does not aim to provide precise percentages or numerical data, but rather tries to show relations and tendencies appearing in the area by analysing the space context and proportions. A very interesting, more specific and most probably useful simulation would be one employing a more advanced modelling tool (such as the ORION model), built with larger amounts of more accurate data (e.g. precise information on services in areas, number of jobs, traffic congestion, transportation options, etc.).

STUDY ON OUTDATED AREAS IN WROCŁAW. PROPOSED METHODOLOGY

Degraded areas are most frequently divided according to their original function and/or their genesis, then according to their surface size, and degradation type; the latter refers strictly to architectural objects on a given area (Lorens 2009, Mironowicz, Ossowicz 2005). This forms the base for vast majority of considerations concerning degraded areas and their potential restoration. However, such methodology fails to take into account the many cases where an area lacks symptoms of degradation but can still suffer from it due to change in socio-economic conditions surrounding them. That perspective seems to be particularly useful with regard to post-communist countries, where not only plenty of buildings have been poorly maintained during the socialist era, but also later, after the transformation, another lot of infrastructure has been abandoned, mortgaged and not bought back, stuck in lawsuits over ownership, looted, etc., and not all possible degradation necessarily means physical decay.

The expanded methodology described below offers a more holistic approach, which begins with proposing a slightly different term – outdated areas – in order to broaden the spectrum of the phenomenon. Following this path, outdated areas could be grouped according to:

1. typology:
   a. origin:  - industrial  - port  - railway  - military  - unused / waste
   b. size
   c. ‘outdatedness’ type:  - functional  - spatial and material  - moral  - compositional

2. location:
   a. distance from the centre
   b. accessibility
   c. neighbouring areas

3. land use

4. property / ownership

5. transformation dynamics (user succession) and ‘trans-formability’

Subsequently, subcategories may be introduced to the ‘origin’ tier to specify spaces even further; that is especially useful in consideration of particular case studies. For Wrocław, this means that industrial or post-industrial areas can be segregated between heavy industry, light industry, former industrial R&D facilities, and industrial unused plots. Ports or former ports may refer to river ports, river shipyards, wharves, and docks. Military areas can be divided into post-military (already evolved into new functions), barracks (frequently re-made into housing), and fortifications. Finally, general unused areas in Wrocław can be understood as those never rebuilt or arranged after WWII destruction, and allotment gardens (a very peculiar, Eastern European category in itself).

In terms of size, the commented study offers two views: numerical (spatial) and compositional ones. The first simply makes note of the surface size of an area; the second, however, takes into account relative, functional size of areas, dividing them into single buildings with their plots, urban complexes / estates, and city blocks or districts.

Degradation (‘outdatedness’) type constitutes an interesting and useful category. Material degradation is basically a measure of how much the technical state of buildings has deteriorated; functional degradation looks into the extent to which the function of an area has become obsolete or in other ways unprofitable; moral degradation takes into account the demolition of the image of a place in the eyes of people (that category is especially representative of spaces which have not fallen off materially); compositional degradation refers to the degree of handicap of design structure of an area.

The study also offers a two-way approach to the aspect of size of areas: numerical and functional. The first method makes note of the surface size of an area; the functional one divides areas into: single buildings with their plots, urban complexes / estates, and city blocks or districts. Of course, a serious but compelling challenge that such methodology faces is the fact that the categories must somehow overlap. That leads to seemingly endless possibilities of sets of features, which can be viewed as a positive and a negative at the same time. An extremely useful and constructive realization emerging from this study is that its findings are easily and comfortably presentable on maps. Figures 7, 8, and 9 (Lewacki 2012) show examples of various classifications of outdated areas in the Wrocław case study.

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The study also offers a two-way approach to the aspect of size of areas: numerical and functional. The first method makes note of the surface size of an area; the functional one divides areas into: single buildings with their plots, urban complexes / estates, and city blocks or districts.
In summary, the presented analyses track patterns and regularities of outdated areas in the city. Their size – both the size of subsequent plots and the gross surface of such areas – indicate that they must be considered an important part in development and growth of Wrocław, which perhaps might serve as a representative of Eastern European cities in general. That, however, requires further and deeper analyses on the role and meaning of outdated areas in the tissue of cities; also, certainly such research should include modelling work.

Acknowledgements
The work of Katarzyna Piskorek, MSc, and Konrad Lewacki, MSc, of the Department of Spatial Planning, Wrocław University of Technology, has contributed to this paper. Both described studies have been conducted using ArcGIS software by the ESRI developer.

References
Drivers of Agricultural Abandonment: Case Study from the Šumava Mountains, Czech Republic

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Abstract
Agricultural land abandonment indicates an inhibition of traditional agricultural practice in Europe. This process can threaten landscape services including biodiversity and management in the Czech Republic. It prepares background for effective land use policies in marginal regions. A regression model was used to identify spatial determinants of agricultural abandonment. Additional information was gathered during stakeholders interviewing and questioning. The probability for agricultural abandonment decreases with increasing slope and elevation. Moreover, abandoned grasslands more likely occur on locations oriented towards south/southeast/southwest as compared to the other directions. Socio-economic factors including shortage of agricultural land in the area, reduction of management costs and time requirements via simplification of livestock practices and land management and subsidizing scheme, explained discrepancies of farming under less favourable environmental conditions. Keywords: agricultural abandonment, land use change, marginalization, interview, spatial statistic

INTRODUCTION
Traditional extensively used agricultural landscapes are considered to be part of European cultural heritage including local traditions and aesthetic values (Carvalho et al., 2010). However, post-war transformation of agricultural system has taken place in Europe with all its technological and socioeconomic changes resulting in intensification of land use on the one hand and land abandonment on the other hand. Demographic, institutional and socio-economic transitions in post-communist countries resulted in broad agricultural abandonment in the region, especially where farming conditions are marginal (Getlich et al., 2007; Lepers et al., 2005; MacDonald et al., 2000). Those processes have been monitored and documented to reverse unwilling both landscape pattern and demographic change and to protect biodiversity. Understanding of agricultural abandonment and its drivers sustains an important topic of socio-ecologic research due its need for facilitation of discussion on adaptation of land use policies to current environmental and socioeconomic pressures (Nainggolan et al., 2012).

Agricultural abandonment is a result of inhibition of traditional farming practice
Abundant forest regrowth indicates inhibition of traditional farming practice over the Europe (Uematsu et al., 2010; Getlich et al., 2008; MacDonald et al., 2000). The main cause of agricultural land abandonment in Central and Eastern European region including the Czech Republic is attributed to reduction of agricultural use and marginalization of this economic branch. The post-war agriculture in the Czech Republic has passed through very uncontinuous development started by move to communism in 1948. Farmers were disciplined to hand over their land to the state, and their land management was managed by cooperatives. The agricultural goal was to maintain food self-sufficiency with little attention paid to social, cultural or environmental threats (Turnock, 1998). After the Velvet Revolution in 1989, the agricultural sector was moved into competitive environment of a market-oriented economy. Prices of agricultural products were liberalized and market was opened to competition with foreign producers. Although Czech Republic implemented a land reform for agricultural sector restoration, former landowners had to face cheap food product importation and lack of governmental subsidies. Less favourable land for agricultural use started to be abandoned and land keepers migrated to the cities. After the entry of the Czech Republic into the European Union, Common Agricultural Policy (CAP) was implemented. Impact of new quota and rise of agricultural subsidies was described in several studies (Corbelle-Rico et al., 2012; Strijker, 2004; Donald et al., 2002). Nevertheless, besides the well described trajectory from agricultural land to forest, new transitions towards built-up areas have been occurring since 1990s due to various businesses and interests of different stakeholders in the post-communist environment of the market economy (Kuennen et al., 2008; Turnock, 1998). Reasons for current agricultural abandonment need to be studied in light of local environmental, social and political conditions.

Agricultural abandonment threats landscape services
Abandonment of traditional extensive livestock systems has led to a loss of cultural heritage elements and aesthetic values (Benayas et al., 2007; MacDonald et al., 2000). Tree and shrub encroachment following grassland abandonment leads to an increase in landscape uniformity and habitat loss (Rippa et al., 2011). Habitats of rarer plant and animal species are seen as most threat by the abandonment in temperate zone (Uematsu et al., 2010; Bolliger et al., 2007; Luoto et al., 2003).

Approaches towards drivers of agricultural abandonment
Many authors including Cocca et al. (2012), Díaz et al. (2011) or Benayas et al. (2007) have been exploring socio-economic and biophysical in order to improve understanding of the causes and/or implications of agricultural abandonment. Combination of a geostatistical and socioeconomic analysis is being applied to address full variety of drivers. Biophysical factors such as elevation, slope, as-
pect or soil properties can be related to land abandonment based on simple spatial statistic (Corbelle-Rico et al., 2012; Verburg et al., 2001 and 2002). Contrary to quantitative statistical approach, socio-economic drivers such as farm characteristics, tenure status or adaptation of the agricultural systems often need to be assessed semi-quantitatively in interviews and questionnaires (Lieskovsky et al., 2013; Nalíèergová et al., 2012), especially when being dealt on local scales. Nevertheless, interrelation of those factors with rationale behind the farmers’ decision to abandon or adjust farming to new realities has been only rarely explored.

Goals
This paper aims to identify main driving factors of agricultural land abandonment in the marginalised regions of the Czech Republic. A case study from the Šumava Mountains is launched to understand relevant drivers of land abandonment and contribute to sustainable landscape planning and management of marginalised regions. The integration of abiotic/geo-bio-physical and socio-economic knowledge is necessary to understand land-use change transitions in the area. Hypotheses of more probable abandonment on steep, hardly accessible, surrounding rivers, high in altitude, oriented towards the north and owned by private persons are tested. Interrelation of those factors with rationale behind the farmers’ decision is studied to recive full picture of agricultural abandonment in the case study area.

CASE STUDY AREA DESCRIPTION
The case study area is delimited by the watershed divide of the Teplá Vltava up to Vltava river estuary. It covers area of 77 km². The central longitude matches to 24.8° and the central latitude to 49.5°. Three quarters of the area are protected by the Protected Landscape Area (PLA) Šumava and the rest by the Šumava National Park (NP). The landscape matrix is formed by forest. The forest cover-age is cut by enclaves of human settlement that are surrounded by grasslands (Figure No 1). The average altitude of the watershed is about 770 meters above the sea level. The traditional land use is represented by timber production and various managements of grasslands and meadows for agricultural purposes. Twenty farms disposing with more than 10 hectares operate in the case study area. Only three of them are considered as farming cooperatives instead of majority of family farms. All agricultural land is used as either pasture or meadow. Due to agricultural intensification in the past on the one hand and agricultural land abandonment on the other hand, threatened plant communities and the specific pattern of the cultural landscape started to disappear (Bender et al., 2005). The abandonment of pastures and meadows followed by forest regrowth is transforming the Šumava landscape and ecosystems.

METHODS
Spatial data preparation
Spatially explicit datasets were obtained from state institutions. Data layers referring to the land cover were acquired from the Ministry of Agriculture, which administers the geographic information system LPIS (the public register of land), and from the Czech Bureau of Land Survey and Register, which control the geographical model ZABAGED (the register of geographical objects).

Identification and mapping of agricultural abandonment
The category of abandoned land refers to land without agricultural use. It was generated by intersection of grassland by ZABAGED and agricultural plots by LPIS in ArcGIS 10.0. The vector data was refined on the background of aerial photographs. It may either remain abandoned and afforested, be converted to other use or be turned back into agricultural use over time.

Projection of spatial variables
Contour lines from ZABAGED were used to calculate altitude, slope and aspects in ArcGIS 10.0. The resulting raster datasets were sized at 20x20 meters pixels to cover the smallest land plots. Raster data on aspects were reclassified into three categories referring to the south, southeast and southwest orientation followed by orientation to the west and east, while the last category gathered the pixels oriented to the north, northwest and northeast. Within ArcGIS 10.0, distance to roads, pathways and human settlement were measured by Euclidean Distance. Information on ownership status was manually gathered from the public database of owners managed by the Czech Bureau of Land Survey and Register and reclassified into categories of private owners, state owners and NP and PLA Šumava. Data on NP and PLÁ zonation were maintained from the Administration of NP and PLÁ Šumava and were spatially referenced in ArcGIS 10.0.

Spatial statistics
The selection of potential biophysical drivers of agricultural abandonment was forced by the literature review, but also it became a subject to data availability. Once all the GIS maps including the land use, land tenure, nature protection holdings, slopes, aspects and distances to house- holds and farstems, roads and paths were completed, the individual maps were converted firstly into raster format with a cell size of 20 m and secondly into ASCII format in ArcGIS 10.0. Balanced sample of all biophysical explanatory variables was chosen and introduced in the statistical model to analyse which variables contribute significantly to the explanation of land abandonment. Following the logic of land use (occurrence of either agriculturally used or abandoned grassland), simple logis-tic approach is used. Statistics were calculated in SPSS for Win. ROC (relative to the farm characteristics or receiver operating characteristic) measure evaluates the performance of model. ROC value higher than 0.7 is considered acceptable for LUCC modelling (Leschen et al., 2005). Pearson’s test was used to estimate inter-relations between the independent variables. A value of 0.8 or greater is considered as a measure of high correlation that demands exclusion of one from the pair of the inter-linked variables.

Semi-structured interviews
To explain rationale for agricultural use and abandonment and to identify different farmers’ strategies, respondents were in-depth interviewed. Semi-structured interviews were designed in a way to obtain information on farmer’s demo-graphic (age, environment of farmer’s origin, education, agricultural experience), socio-economic (land acquisition, career, income), ROC (relative to the farm characteristics or receiver operating characteristic) characteristics. Moreover, respondents were asked to express how changes in land use and agricultural managements and to explain what has driven their decision about the change. Finally, farmers indicated which motivation and limitation they feel in terms of farming in the case study area. From the total of 24 registered agricultural land holders in the case study
area, 17 farming subjects were questioned, corresponding to 70% of the farmer population. Only farmers managing more than 10 hectares of land were requested to fill the questionnaire. Three of those refused participation in the survey.

RESULTS

Probability for agricultural land abandonment in the Šumava National Park (NP) and Protected Landscape Area (PLA)

The location of abandoned grasslands is explained by elevation, slope, orientation to the cardinal points, distance to built-up areas as well as to roads, ownership and nature conservation policy. Moreover, distance to river contributes to explanation of agricultural abandonment in the NP. All of the computed results are visualised in the Table No 1.

In both the NP and PLA, the probability for abandonment of grassland relative to all other land uses together decreased with increasing distance from built-up areas and roads and decreasing elevation and slope. More distant, steep and elevated grasslands were more sensitive to abandonment in both the NP and PLA. Abandoned grasslands more likely occur (as compared to all other land uses) on locations oriented towards the south/southeast/southwest as well as to the north/northeast/northwest.

Neither elevation, nor distance to the river and distance to pathways were significant explanatory factors for abandoned agricultural land.

Inter correlation between independent variables

The distances to built-up and forest are slightly intercorrelated with slope and elevation. The Pearson correlation (2-tailed) between variables is summarized in the Table No 2. None of Pearson coefficients exceed the threshold of 0.8. The test is significant at p=0.01.

Farm characteristics, vulnerabilities and strategies

Seventeen of farms were clustered into four groups according to productive characteristics. Factors that make farmers vulnerable to land abandonment and strategies to face it were identified during semi-structured interviews with farmers (Table No 3).

Tab. 3 Farms characteristics, vulnerabilities and strategies

* A: Age of farmer; E: Farming experience (yr by average); S: size of property (ha); N: animals (cattle item by average); MA: main activity; I: main income; W: work load (%; person full time=100)
Discussion on results

From the results of logistic regression it could be concluded that the land abandonment is primarily determined by ownership status and delimitation of nature protection reserves, followed by the orientation to the cardinal points, slope, zonation of the protected landscape area and national park, elevation and distance to human settlements and roads.

Many studies from Europe argue that the less accessible area due to steep topography of mountain regions are more likely to be abandoned (Vassilev et al., 2001; Bolliger et al., 2007; Mottet et al., 2006). The distance measures are proxies for transportation cost and travel time to the grassland (Overmars and Verburg, 2005). More probable land abandonment of state-owned land surrounding human settlement demonstrates insufficient capacity of local municipalities to manage grassland and politic pressure on keeping the land around villages for an adequate living. This assumption was supported by mentioning in our interviews. Farmers feel vulnerable to insecurity of land tenure sublet from local municipalities. Furthermore, some respondents mentioned their disorientation to the case studies was suggested by the municipalities. No rarely happens that the agricultural land is inappropriately categorized as the “other land”. For the category of the other land the municipality settles multiplica- tion coefficient for taxes recruitment. Farmers who manage land from the category “agricultural land” pays EUR per hectare and those who manage land of same quality belong- ing to the “other land” category pays EUR per hectare.

Discussion on methods

Mapping land abandonment

Land cover changes including grassland afforestation might be mapped based on cadastral parcel scale (Kamp et al., 2011; Mottet et al., 2006). However, digitalized data were often available for areas the most efficient in land-use and confi rm recent trends as suggested by the land-use statistics (Kamp et al., 2011; Mottet et al., 2006). Our approach allows relating qualitative information on reasons for farmers’ decision gathered in interviews with statistically approached and quantifi ed operators driving the decision and these results will help in understanding the causes and impacts of land-use change and support sustainable landscape planning.


Abstract
The landscape we see today has formed over the course of a long period of time. Transformation processes began in the ice age with the formation of the relief, whereas stratification of culture-historical development has formed during the last centuries. The aim of this study is to investigate the most significant points in the transformation processes of Latgale Planning Region church landscape. It is also important to look at this transformation in relation with development processes of European landscape and linguistic material - dialect - and to describe the process of each of the historical periods of Latgale. Up until now there have been no studies of this kind on church sceneries. Latgale is mainly noteworthy of its church sceneries. They depict the diversity in the social, economic, political and cultural relations. Modern church sceneries have promoted the formation of many national and ethnic groups which have resided in this region for centuries. The church landscape is one of a region that can take credit for having started its life anew five times, because each of its historical periods can first and foremost be characterized by an almost complete change in the ethnic and sociocultural background (Piotrov, 2009). At first a list of church sceneries was compiled. During further work, the church sceneries were divided according to their respective historical periods of Latgale. The data was processed using the statistics method, separately looking at the transformation of church sceneries in each historical period and grouping them by denomination.
This common church landscape has gradually formed throughout the various periods of history. The total number of church landscapes in the historical transformation periods in Latgale: Germany-2; Poland-47; Russia-100; Latvia-42; Sovie-4; period of restored Latvia-4. Latgale church landscape has formed during five historical periods and this is what has had the most impact on them. The modern church sceneries display influences from various historical periods which correlate with the development of cultural processes in European sceneries. This study reveals the diversity not only in terms of a multinational society and influence of various denominations, but also as a mirror of culture-historical stratification.

Keywords | Key phrases
Latgale, church landscape, historical periods, historical transformation

INTRODUCTION
The origin of the cultural landscape of churches in Latgale
If events have occurred in distant past, the less precise evidence we have. When Christianity spread in Latvia, including Latgale, it still is an unanswered question. The first information about Christianity reached the territory of Latvia in a considerable period of time before the arrival of crusaders, but the information about orthodoxy was known already in the 11th century (Avotina, et al., 2004). Currently Latgale can be characterized by the presence of all traditional confessions formed in the course of history (Kaminska, Bister, 2011). The beginning of the new faith in Latgale was recorded in the 11th century and is associated with the Rus. The amount of the origin of the Lutheran religion in the 16th to the 18th century cannot be precisely identified, and a lot of evidence on this event is lost. Since the 18th century, Orthodox Church has a definite place in the cultural landscape of Latgale, however, the origin of the old-believers is related with a more ancient history – the middle of the 17th century. The community of Moses believers in Latgale supplements the unique and diverse cultural landscape of which information dates from the 18th century (Kaminska, Bister, 2011).
The 13th century is the time when the territory of Latvia started to change rapidly (Avotina, et al., 2004). Contrary to the 13th century, when many new elements of cultural landscape were created, the Livonian war brought widespread damage. Although the time period from the middle of the 16th century until the end of the 18th was destructive, it formed the base of regional differences in Latvia (Avotina, et al., 2004).
As the natural landscape of Latgale is unique, the architectural heritage of Latgale that has survived from the 17th century to the 18th century is based on the process of cultural development, religious structures, and development of sacred art and architecture according to the regional peculiarity. The development of the studied territory was influenced by two phenomena – polonization and counter-reformation (Kaminska, 2008).
The influence of these two phenomena is present until nowadays and affect the character of landscapes. Polonization has influenced the temporal life, while counter-reformation has influenced the architecture and art of churches. The visible evidence of counter-reformation is directly provided by the building of the Catholic churches. Rēzekne and Daugavpils are examples of the changes of denominational structure started. However, parishes were established outside these centres and new churches were built. Uniting different preconditions, Catholic churches appeared in Latgale Upland at the end of the 18th century (Kaminska, 2008). Counter-reformation is an important phenomenon that has affected the Latgale church landscape of Latgale Upland. The investment of the spiritual orders and communities, official priesthood and sponsors, as well as the builders of churches is important in the formation of it (Kaminska, 2008).
The 17th century is the time when a peculiar spiritual culture was formed in Latgale which was defined due to the coexistence of Catholicism, Orthodox, Old Believers and Judaism (Avotina, et al., 2004). In the 18th century, when Latvia was not a united territory, historically developed regional differences were strengthened and developed (Avotina, et al., 2004).
After the World War I, the religious life of Latvia experienced great changes. On the one hand, there is a law that the Church and country are separated, on the other hand, there is a law on teaching religion in school programs (Avotina, et al., 2004). The 20th century was the time when the landscape of churches for the first time started to become a freely formed expression of a society due to the interaction of various political and church processes. During the years of Soviet Union occupation, church was discussed in various ways, therefore, stopping the voluntary development created by the nation. Several obstacles were established to hinder the maintenance of churches. If churches did not collapse, they were used as gyms and warehouses or for other purposes, or remained empty (Avotina, et al., 2004).
The landscape of the church describes the evolution of the development of the society. These landscapes have formed many national and ethnic groups that have lived here for centuries by mutually influencing processes. The history of...
Latgale is the history of the region which has started its life from the beginning five times, because, firstly and mainly, each of these periods is characterized by almost complete change of ethnic and socio-cultural basic (Fjodorov, 2009). With the appearance of the first Christian buildings in the Baltic countries, its citizens were provided with an original and new notion, and a system of values (Spārītis, 1999).

Latvia is an ancient country with a relatively short period of national existence (Vīķe Freiberga, 2010). People do not live in a disconnected and sterile environment, therefore, also the landscape is international with characteristics of the world. But socially cultural environment determines what kind of landscape model is forming, which cultural elements of the world we choose to embody in our landscape and the environment of life.

**The development of studies on church landscape**

Along with the development of the research field, the geography of the religions has developed also. Whole branch of this research field is devoted to study the mutual connection between the landscape, mental activity and health in its broadest sense.

In this context, a landscape as the determinant of the importance of the quality of life increases even more when we talk about church landscapes.

**METHOD**

Monographic or the descriptive approach is used, which is based on the existing scientific cognitions and theory, as the theoretical justification for the development of the diploma paper. In order to capture the landscape of churches in the process of historical development in the context of Europe, Latvia and Latgale, the study of history is mainly carried out by the origin or descriptive approach, thus, describing and gradually revealing the most important processes of the development of church landscape. The method of origin is the analytically inductive method that moves from separate things to common things. In the result it is a possible to carry out a summary. The most important information for the summary is the representation and summarization of different origins of the church landscapes into a unified scheme and cartographic material. The basic map for the illustration of a landscape structure is made according to the Annex 3 of the law “Law on Administrative Territories and Populated Areas” adopted on February 15, 2010 in addition to a schematic arrangement of church landscapes (Fig. 1). At first territory was defined. Latgale planning region was chosen as the territory to be studied for the historical illustration of the origin of church landscapes in Latgale. Based on several sources of literature (Kaminskis, Biatera, 2011; Krūmiņš, 2003; Tūrisma attīstības..., 2010; SIA www.viss.lv..., 2010), record of objects was made.

Firstly, all churches that exist nowadays are mentioned in the summary, also those that are abandoned and not used. Secondly, after exploring the sources of literature, the time of the origin of these church landscapes is determined. The year of building the church or the year of building the first church in the particular place (if many churches were built in the area) is considered to be the year of the origin of the church landscape. According to the historical periods of Latgale proposed by Fedorov (Fjodorovs, 2009), the years of church landscape formation also are divided accordingly. In conclusion, the origin of these church landscapes is divided according to the historical periods of time and attached to the origin of the architectonic space of the world, Europe and Latvia.

**Fig. 1. Scheme of church landscape displacement in Latgale planning region in year 2013 Source: by author**

**Fig. 2. Church landscapes in the historical transformation periods in Latgale Source: modification by author**

However, the situation in the world is to be considered as different, as revival of the religious sphere is felt (Henkel, 2005). Europe is regarded as the only continent where strong sense of secularization is seen, which differ from the global trends of religion. Secularization of U.S.A is associated only with the society, not with individuals (Henkel, 2005).

Religion in Europe and mostly in Western Europe, hence also the sacred landscape experience recession – abandoned churches, decline in parish members, as well as general decline of the power of church influence are evidences of the ongoing process. According to different sources, the numbers of congregations have not decreased in Latvia and changes in the number of congregations are quite minimal. However, the number of members of the congregation in recent years has a tendency to decrease that could be explained by the dynamics of the overall population. It should be acknowledged that in the past two years religious organizations in its reports and reviews state that the number of congregation members has increased but there are no objective proof and confirmation to these statements (2011, Gada)...

In recent years the importance of the sacred landscape for the improvement of human’s mental and physical health has grown (Williams, 2010). It is based on the connection between the landscape, mental activity and health in its broadest sense.

The development of studies on church landscape

Along with the development of the research field, the geography of the religions has developed also. Whole branch of this research field is devoted to study the mutual connection between the place and the religion, as well as the localization of the religion. The mutual connection of religion and the place is studied greatly in Germany and Sweden (Henkel, 2005).

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In this context, a landscape as the determinant of the importance of the quality of life increases even more when we talk about church landscapes.
RESULTS

A structured, historical transformation process of the currently existing church landscape created by the author. Separating certain periods of time and forming their connection to the development that affected the church landscape of Latgale Upland, they are separated directly to the area of Latgale.

And the Baltic Sea region has served as a meeting place for different cultures – Orthodoxy from the east, Christianity from the west and Islam that came with the Tartars (Ryden, Migula, Andersson, 2003). Several types of sacred buildings – churches, synagogues, prayer houses are found in this region.

Landscape is formed by various impacts of the past, historical events, human-induced and natural changes. Present landscape does not show all the transformation layers in the changing contemporary landscape. First of all, one shall focus on the transformation processes of church landscapes, how the church landscape has formed and its development through the ages.

Reference point for the genesis process of church landscapes is churches and first years of their building. Each church landscape individually has gone through its own transformation processes created by different kind of denominations, although the total number of which is only 42 church landscapes. This period ended in 1940. And in the fifth period only 4 churches new churches were built. The same period in the past, in the changing contemporary landscape. First of all, one shall focus on the transformation processes of church landscapes, how the church landscape has formed and its development through the past.

Current structure of church landscapes in Latgale is even across the region. Such overall church landscape has evolved gradually through all historical periods (Fjodorovs, 2009; Spārītis, 1999). It appears that, in spite of the vast number of sources, part of the history has remained unrevealed and thus the data on formation periods of the oldest church landscapes are approximate. However, the regional landscape development through the first period which is the German period (Fjodorovs, 2009) the territory of Latgale was included in Livonia. During this time, the ties between the region and the neighbor countries and on their 200 year anniversary it received the status of a bishopric. In addition, through time the adjacent territory of Aglona has been influenced by the development between the time period and functional requirements. The period of Latgale has brought the greatest changes for church landscapes that are not evaluated similarly. During this time, there were from bitter conflicts between Protestants and Catholics slots in the gates was created, that surrounded it, as well as other elements which were built in the garden anew.

This is considered as explicit influence of globalization and urbanization on the traditional landscape. 47 new church landscapes were created, of which 41 are Catholic church landscapes. Third period is Russia (Fjodorovs, 2009), that started in 1772 when Latgale was incorporated into the Russian empire. Most of the church landscapes were formed during this period of time – with the total number of 100 church landscapes; moreover, all five religions explored in the study are represented. The fourth period is also rich with various church landscapes created by different kind of denominations, although the total number of which is only 42 church landscapes. This period ended in 1940. And in the fifth period only 4 churches new churches were built. The same period in the past, in the changing contemporary landscape. First of all, one shall focus on the transformation processes of church landscapes, how the church landscape has formed and its development through the past. Considering the importance of church lands in this period, first church landscapes appeared. During the first period which is the German period (Fjodorovs, 2009) the territory of Latgale was included in Livonia. During this time, a lot of was borrowed from the Western cultures. And during the period of Livonia, first church landscapes appeared. During this period, there was a lot of church landscapes. However, the historical processes in Latgale, in most cases, have been different from the rest of Latvia.

Looking at these five periods in the context of Europe, one can observe many common things with the transformation processes of European landscapes. Within Europe, landscapes which were built in the Latgale planning region, for example, such Catholic churches as Aglona, Dagda, Asūne, Piedruja, Krāslava and Pasiene. During this period the development of religious architecture has evolved in a similar way to Krāslava, Malta and Dagda.

This trend is based on the rapid increase in the number of people. During this period, the public authorities directly affect the formation of church landscapes, their location and the development. A good example in modern church in Rēzekne, where one can see the geometrical structure of the buildings around it, as well as the square and park.

At the end of the Russia period, churches in the style of classicism appear which in some way has like a nostalgic connection with the churches made in the Poland period. Then the classical era comes that has left a modest trail of evidence of church landscapes in Latgale. The post-war church landscapes which have explicit trends of globalization and urbanization are only few in Latgale. After the war, new church landscapes were rarely created. After 1991, 4 churches – in Krivanda, Dagda, Daugavpils and Zemgale were built. The development of religious architecture has evolved in a similar way to Krāslava, Malta and Dagda.

Changes that have occurred through centuries, but in the last decade changes are seen as threats to landscapes. The subject of further chapters will be what kind of elements new church landscapes met through the changes related to them occur. In most cases processes in Latgale have been different from the events in the rest of the territory of Latvia. The description of the historical context is important and must be taken into account the background of the formation process. Many different factors affect the historical processes, and in the framework of this study, the main link is made landscapes and their success in world, Europe and Latvia. Such spheres of influence as religion, politics and culture are taken into account.
Acknowledgement
The work had developed within the framework of European Social Fund support for doctoral studies program of Latvia University of Agriculture. Agreement No.2009/0180/1DP/1.1.2.1.2/09/PIA/VIAA/017.

References
The Effects of Globalization and Historic Events on Landscape Character of Czech-Austrian Borderland

Jan Richtr, Henry W.A. Hanson, Matthew Potteiger

Abstract

As a consequence of the velvet revolution, land control of large agriculturally productive properties were transferred from agricultural cooperatives to private ownership. This transfer has resulted in large land holdings with private control. Of particular interest are the Sudeten lands where the German speaking land owners lost ownership as a result of the Beneš decrees at the conclusion of the World War II. The surrounding landscape of the small village Mutšov in Slavonice cadaster, Czech Republic, as well as the smaller villages in close proximity of these two villages on both sides of the border and relate this development to historical changes.

INTRODUCTION

The area of interest is located on the Czech-Austrian border between South Bohemian Dačice and Dobersberg in Lower Austria. The two compared landscapes surrounding the villages of Reinož and Mutšov are both adjacent to the Slavonice cadastral boundary. The Czech side of the border historically belongs to the Sudetenland. The aim of this paper is to compare land management and landscape development in close proximity of these two villages on both sides of the border and relate this development to historical changes.

SOCIAL AND POLITICAL DEVELOPMENT

Both villages were part of the Austria-Hungarian empire until 1918. The majority of inhabitants in the area were Sudeten Germans and Austrians with a minority of Czechs. The cultural and economic exchange between these two environments had virtually no borders. After World War I the Czechoslovak Republic was established and the Sudeten land became part of the new national state of Czechs and Slovaks. During the period between the wars the number of Czechs on the Czechoslovak side of the border was slowly increasing mainly because of enforcement of government institutions and national influence in the area (Hanák 2010). Not only the economic crisis, but also political influence of Hitler’s Germany resulted in radicalization of the German inhabitants sparking local tensions immediately prior to World War II. The whole area was part of the Third Reich and Czech families had to move to the Czechoslovak island (Hanák 2010). Immediately after World War II all Germans from Mutšov were expelled. The village population was zero (see Tab. 1) and all the assets were assigned to new owners during the Czech repopulation that followed. All agricultural land and farms were under governmental control and assigned to the new Czech inhabitants who had no ties to the land.

LANDSCAPE DEVELOPMENT

Agriculture and forestry are the major economic activities in this traditionally agrarian landscape. The original field pattern represented by thin, long strips always with cattle (Strnadová 2011). Since cattle or horses are difficult to turn around, the long strips made it possible to plow large areas with the fewest turns. This pattern can
be clearly seen in pictures of both Reinolz and Mutišov (Fig. 1). Due to land reform in 1949, collectivization, introduction of heavy mechanization, large-scale agriculture, the original plots were consolidated and unified, resulted in more monotonous landscape with significantly larger parcels and lower crop diversit. Since these conditions did not occur on the Austrian side of the border, where the landscape change was impacted by rapid historical changes, the traditional patterns are still visible. Surprisingly, if we compare allotment structure of the Mutišov cadaster in 1828 and Reinolz cadastral today (Fig. 1 above), the allotment structure on the Austrian side remained almost the same throughout the whole modern history. Furthermore, the aerial photographs in figure 1 show increasing field unification on both sides of the border in the last 17 years. This reveals similar agricultural practices on both sides that require large filed plots and also suggests the influence of the EU Common Agrarian Policy (CAP).

DISCUSSION AND CONCLUSIONS

From the comparisons in the Fig.1 between Reinholz and Mutišov, it is clear that land reform and land adjustments in addition to collectivization and agriculture intensification on the Czech side of the border created large fields of mostly arable land. This process was speeded up by expulsion of the native population and creation of collective farms with no inherited relationship or responsibility to the land. This radical landscape change caused during socialism has not been reclaimed in the last 23 years of the democratic regime in the Czech Republic. On the contrary, the cultivation of the land in large field blocks has continued during capitalism and the size of such monotonous blocks continues to increase as numerous plots of land are managed in single fields. This trend was also supported by the fact that expelled Germans from villages such as Mutišov and their descendants had no claim of restitution for the taken property, due to Beneš decrees.

We can also observe the trend differences on the Austrian side that was not affected by radical historic events, but if we compare the field structure in 1993 and 2010 (Fig. 1) it is obvious that the average farmed field block increased in size. This might be caused by several factors. As it is showed in the Tab. 1., the population of Reinolz is slowly decreasing in recent years. That could mean overall de-population in the borderland area on the Austrian side; therefore, lower interest in farming that can resulted in field unification of the fields with different owners. Another cause could be the dominant influence of the CAP and orientation of the farms to more intensive production to meet the demands of the globalized market.

The field unification together with intensive farming methods also poses serious risk of soil degradation and overall biodiversity decrease that can result in reduced resiliency to climate changes and subsequently lower crop yields.

This introductory comparative study shows high potential for further research of impacts of socio-economic changes on the landscape and agriculture practices and agrarian policy in these borderland regions.

References

Rural landscapes should be understood as a complex unit of rural settlements and landscapes that surround them, penetrate them and bind them together into a coherent whole called countryside. It is not as easy to separate rural landscapes and settlements as in the case of urban landscapes where we easily can define borders between the urban environment and open land as the contrasts are much more significant. Countryside is a scenery that consists of village roofs adorned by tree crowns and dominated by church towers that continue by trees into the surrounding fields or woods. Small towns and villages are an inseparable component of the countryside image. Our understanding of rural landscapes is therefore more complex and it includes small rural towns and villages and the open rural landscape as a coherent whole.

Transformations of rural landscapes are nowadays visible on urban, peri-urban and landscape structures of many Slovak rural settlements. The most common transformations within the built-up area are represented by following changes: rebuilding of the original rural architecture; new architecture of private and public buildings; reconstruction of local transport structures; improvement of the grey infrastructure, extension of public facilities and revitalisation of central public spaces that has been so much subsidised during the recent history. All these contemporary changes within the urban area of rural settlements have many positive but also a wide range of negative expressions. Our communities face an ongoing development pressure, even in the village centres e.g. by supermarket chains. Many revitalisation projects have neglected coherent interdisciplinary solutions and were dedicated mainly to transport structures and paved surfaces.

Changes in peri-urban areas of rural settlements are often dominated by suburbanisation and urban sprawl related to housing and industrial development (Štěpánková and Kristiánová, 2012: 180). Changes in the open land are not that much frequent. Although, there are some ongoing transformations like new transport constructions (motorways, ring roads etc.). Nonetheless, the most significant problems in the open land are still represented by the inheritance of the previous decades (collectivisation of agriculture, reduction of the open land permeability, low share of non-forest woody vegetation and field baulks, draining the landscape by water management interventions etc.).

All the described issues are certainly well known in other post-communist countries as well. These negative situations have to be answered by progressive interdisciplinary improvements. The role of landscape architecture and landscape planning within this transdisciplinary approach consists in the improvement of the green infrastructure on the one hand and raising the awareness of the public on the other hand (Ahem, 2010; Benedict and McMahon, 2006; European Commission, 2010 and 2013; Helkum and Smith, 2006; Jongman, 2004; Supuka, Feriancová and others, 2008).

Normalised buildings in the context of traditional rural architecture

The previous communist regime caused a lot of very marked structural changes within the built-up areas of small rural towns and villages. The centralistic way of planning left behind a visible footprint on several features of rural settlements, e.g. on the rural architecture. There were designed and built normalised two-floor buildings with flat roofs that were built not only in new streets but also in historic urban centres with traditional single-storey houses with inclined roofs and a predominantly linear disposition arranged according to the building line. These interventions partially disrupted the cultural legacy of these valuable historic ur...
ban structures and changed the image of rural settlements and very often also a wider image of the overall rural landscape in accordance to perception conditions. Not only the private houses were visually and typologically very monotonous but also public buildings of community facilities like community centres and village halls, primary schools, department stores, etc. This planning culture had not only a local but also a wider, regional impact, as normalised building often disrupted the local identity and spatial qualities of rural communities (e.g. schools or department stores were designed in the same way in each community and the traditional marks of regional and local architecture were neglected. The intention behind this approach was probably the aim of centralistic planning that was to decrease the inequality in quality of life in rural (small towns and villages) and urban (towns and cities) settlements.

Oversized transport structures in small towns and villages Very significant marks of centralised communist planning were also oversized transport structures. These were planned and implemented according to excessive transport needs on the long road to the community centre and building up thereby an open green space of the local green infrastructure. We have started a critical reflection on this investment intention on the civic forum that works on the social network Facebook which has currently more than 1,400 members that is concerning the total number of inhabitants (around 5,300) quite significant. Unfortunately, local inhabitants have not been involved in this decision as a known term that caused a wide range of problems impacting the green infrastructure of rural landscapes. Some organic components of the rural green infrastructure have been compromised (e.g. the non-formal green spaces - vegetable gardens, meadows, wetlands and others). This had also a marked social impact in the form of reducing the land permeability.

Transformations in the open rural landscape Rural landscapes are in a continual transformation process which is mainly related to the actual social and political system. Changes in rural lands try to solve problems of countries underwent during the previous political regime significant changes that were mainly related to intensified agricultural production in the 2nd half of the 20th century. In these countries, centralisation of agriculture (e.g. large farms) was a known term that caused a wide range of problems impacting the green infrastructure of rural landscapes. Some organic components of the rural green infrastructure have been compromised (e.g. the non-formal green spaces - vegetable gardens, meadows, wetlands and others). This had also a marked social impact in the form of reducing the landscape permeability.

The landscape surrounding the urban area of the small town Tvrdošovce is dominated mainly by agriculture. The majority of the cadastral area is covered mainly by a very fertile black earth. Therefore, the agriculture in this locality has always been very intensive and during the previous political regime has been even more intensified. This caused a significant change in land-use shares in favour of agricultural production.

Nowadays, there are also new problems that impact the green infrastructure of open rural landscapes, mainly their social dimension. There is a tendency of further lowering the land permeability. Such a case appeared in the open landscape of Tvrdošovce rural town, where some landowners put barriers at the boundaries of their arable lands in order to avoid the presence of other users under the pretence of private hunting ground with prohibited trespassing. They have neglected the fact that the field roads in the open land of the town were used for decades as a communication providing physical and social linkage between small towns in the countryside. This ongoing trend lowers the permeability of the landscape and thereby the cultural, social and historical legacy of linkages in the agricultural countryside.

TRANSFORMATIONS IN THE OPEN RURAL LANDSCAPE

We have elaborated a complex green infrastructure concept for the rural settlement Tvrdošovce. This concept explores the potentials of the green infrastructure to become a contribution to a sustainable development of rural landscapes. The first green infrastructure concept has been elaborated within the master thesis Landscape architectural design of the rural settlement Tvrdošovce (Tóth, 2012). Within this work, a comprehensive green infrastructure concept has been elaborated at three planning levels - micro-region and scales - from the micro-region, through the cadastral area, up to the village centre. The green infrastructure concepts at micro-regional and cadastral area level include the micro-greenways plan respond to the described problems of rural landscapes related mainly to open land structures. At the urban level area, it consists mainly of public space design for the present village centre, see fig. 1 and the historical village core represented by a wide linear open space of the historic streetscape, see fig. 2. The effort of green infrastructure improvement continues mainly in the doctoral research that is accompanied by particular projects like student workshops (Tóth, 2013) and awareness raising by public discussions, via social platforms and networks.

GREEN INFRASTRUCTURE OF THE RURAL SETTLEMENT AND LANDSCAPE

We have elaborated a complex green infrastructure concept for the rural settlement Tvrdošovce. This concept explores the potentials of the green infrastructure to become a contribution to a sustainable development of rural landscapes. The first green infrastructure concept has been elaborated within the master thesis Landscape architectural design of the rural settlement Tvrdošovce (Tóth, 2012). Within this work, a comprehensive green infrastructure concept has been elaborated at three planning levels - micro-region and scales - from the micro-region, through the cadastral area, up to the village centre. The green infrastructure concepts at micro-regional and cadastral area level include the micro-greenways plan respond to the described problems of rural landscapes related mainly to open land structures. At the urban level area, it consists mainly of public space design for the present village centre, see fig. 1 and the historical village core represented by a wide linear open space of the historic streetscape, see fig. 2. The effort of green infrastructure improvement continues mainly in the doctoral research that is accompanied by particular projects like student workshops (Tóth, 2013) and awareness raising by public discussions, via social platforms and networks.

Transformations between rural settlements and landscapes Although, transformations between rural settlements and landscapes in the so called contact zone represent a highly actual issue in many rural landscapes as stated by (Štěpánková and Kristiánová, 2012), there is no significant evidence of this phenomenon in the case of the rural town Tvrdošovce. This is due to geographical and territorial attributes of the settlement as it is not under a direct spatial and functional pressure of bigger urban settlements. The settlement is situated in a predominantly rural landscape in the agricultural countryside of south-western Slovakia.

Transformations in the open rural landscape Rural landscapes are in a continual transformation process which is mainly related to the actual social and political system. Changes in rural lands try to solve problems of countries underwent during the previous political regime significant changes that were mainly related to intensified agricultural production in the 2nd half of the 20th century. In these countries, centralisation of agriculture (e.g. large farms) was a known term that caused a wide range of problems impacting the green infrastructure of rural landscapes. Some organic components of the rural green infrastructure have been compromised (e.g. the non-formal green spaces - vegetable gardens, meadows, wetlands and others). This had also a marked social impact in the form of reducing the landscape permeability.

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Nowadays, there are also new problems that impact the green infrastructure of open rural landscapes, mainly their social dimension. There is a tendency of further lowering the land permeability. Such a case appeared in the open landscape of Tvrdošovce rural town, where some landowners put barriers at the boundaries of their arable lands in order to avoid the presence of other users under the pretence of private hunting ground with prohibited trespassing. They have neglected the fact that the field roads in the open land of the town were used for decades as a communication providing physical and social linkage between small towns in the countryside. This ongoing trend lowers the permeability of the landscape and thereby the cultural, social and historical legacy of linkages in the agricultural countryside.
Fig. 1 (left) The public space design for the present village centre aims at a conceptual and perceptual interconnection between "the present" and "the past", between the current and the historic village core. One of the most significant elements in this concept is the church that serves as a landmark and provides a visual and mental linkage between the two different parts of the village centre. The key design elements consist in open views, clear compositional lines and shapes. The space is thoughtfully designed by simple compositional elements - deciduous trees and shrubs, perennials and continuous grass surfaces. The new path system tries to fit to the community life and needs.

Fig. 2 (bottom) Public space design for the present village centre and the historic village core represented by a wide linear open space of the historic streetscape. This specific urban structure of the village stands for a significant cultural and historical heritage of the rural community. This space is dominated by the church situated right in the village centre which stands for a physical and perceptual landmark of the community. The space varies in its horizontal and vertical spatial attributes as well as in diverse situations and shifts between different types of open space.

Acknowledgement
This contribution has been elaborated within the grant projects VEGA No. 1/0769/12 and KEGA No. 019SPU-4/2011 of the Ministry of Education, Science, Research and Sport of the Slovak Republic.

References


As I am neither an Architect nor a Planner I tend to approach a conference such as this as an opportunity to educate myself—and when asked to contribute I consider what might be of value to the experts in these fields I cherish. My perspective is that of a traveller who likes to listen. For me the most interesting stories—reflections on the human condition—have come from 16 years of field work amongst the so called Native People of the world. In particular some of the surviving tribes in the South West of the USA have confronted me with a world view that challenges much of what we claim to understand about space and time. How many cardinal directions do we consider...really? What are the essential aspects of ‘roundness’ and ‘squareness’; and how do they affect us? What is the relationship between the built structure and its environment, materials and time?...Our original, fundamental, worldview is obviously the basis for all our endeavours, and becomes especially visible in the way we plan and built. Each of us has their own view on where we currently stand with that, where we could and should be going with it. I postulate that one of the most wonderful advances in the age of global interconnectedness is the opportunity to confront ourselves with ‘the other’, and reflect on where our ideas and subsequent aesthetics arise from, and how they affect us. Then we may take a step back and make more deeply informed decisions—especially in fields such as Planning and Architecture which are so manifest, so solidly present in our lives, constantly, everywhere and inescapably.

Alexander Stipsits
Urban Project in Riga’s Public Space: Behind the Curtain of Rational Decision
Helena Gutmane, Jan Schreurs, Peteris Skinkis

Abstract
During the last decennia urban projects as main instruments for transforming physical urban environment have been increasingly impelling social reactions and challenging the rational paradigm still prevailing in urban planning practice. Complex interaction of manifold human values, motivations and desires provides permanent tension whose modus varies from explosive conflict and open display of negative collective emotions to durable latent confrontation.

This paper introduces an initial stage of the research aimed to investigate the spatial applications of human feelings. Applying the concept of habitus of Bourdieu from the social science we use it as a method to study the interplay of the manifold social identities and their representations in urban planning and design.

In conclusion the article discusses the relevance of socio-psychological analysis of spatial projects and its methods for researching and understanding the ways human dimension, manifested in feelings and emotions, which underlines organized spatial interventions in contemporary public space.

Keywords│Key phrases
urban project, public space, rational paradigm, habitus

BIG QUESTIONS OF THE SMALL SQUARE
In their book “Habitus: A Sense of Place” which is based on the papers for the conference “Habitus 2000” in Perth, Hillier and Rooksby note the fact that the overarching challenges of the recent status quo in the urban planning and design are incarnated in the semantically indeterminate, ready-made notions of “sustainability”, “public life”, “development” and others, which are “empty signifiers” functioning as an absolute doxa (Hillier, Rooksby, 2005:7). Although these urban metaphors are being endlessly repeated as “magic formulae” they still successfully impel a certain direction on the global scale of abstract theories and generic principles. Nevertheless, they are fading, losing their semantic filling “in translation” of principles of sustainable development into spatial patterns and projects.

During the processes of translation the qualitative aspects are often lost in favour of measurable indicators.

Articulated in metaphors by the renowned urban thinkers, ephemerally ideas transit from the “theoretical” top through higher echelon of policy makers and administration, where they are incorporated into policy documents of different hierarchical levels. These documents then get interpreted by culturally and structurally defined institutions, which are, in fact, a collective body of individual agents. When, at which moment and why does the act of “de-metaphorization” happen? What prescribes success or failure of the idea in the “action on the ground”? There are different concepts which help to look for the answers approaching complex relations between Agency, Structure, Culture and Institutions (Moulaert, 2011).

The authors use the case of the contest for the re-design of the Square in front of the Riga Castle in attempt to highlight the processes which can help to understand the nature of the relationships within urban practice.

The choice of the case is influenced by the role urban projects play in spatial production of contemporary urban environment. During the last decennia urban projects have become the main instruments for transforming physical urban environment (Banai, 2013) and nowadays they are the “on the ground” institutions which every day deal with the challenges set by urban metaphors. Using the broad understanding of institutional work, we assume that Urban project is a temporary, “mobile institution” with a weak outspoken hierarchical structure, both hidden and explicit hierarchically organized communication, its own set of rules and representations, as well as, depending on the scale, a target or a complex of targets.

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Urban projects are situations of both complex knowledge production (including variables of knowledge – spatial and social, rational and sensual, explicit and implicit) and human energy, co-operative as well as confronting. They can be conceived as a continuous process of transforming implicit, tacit verbally hardly expressible ‘knowing’ (Polanyi, 1966) into articulated, logically deduced and rationally shared knowledge. The spatial reflection of knowledge transformation is the particular focus of urban project, their object and subject that differentiate this practice from other human practices. Being doubly related to the space, it contains a higher amount of obviously unexpressed settings, rules, norms and representations (therefore a tacit knowledge, edge again), “because the language of space is essentially non-verbal. We do not express such things in words because they are based on implicit knowledge” (Lawson, 2012:25).

The contest for the Castle square was carried out in 2009. The main motivation for the re-design was creation of high quality public space to enable representative function of the presidential Protocol. The contest was launched as a response to the initiating letter of the President of Latvia to the Lord Mayor of Riga in the beginning of 2008, in which he expressed readiness to take responsibility over the re-design of the Square in front of the Riga Castle in attempt to highlight the processes which can help to understand the nature of the relationships within urban practice.

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serves to establish the new evidence of necessity of bringing changes in the particular public space. It includes initiation, contest preparation and execution, negotiation and transformation of the urban space. It includes the active phase lasting thirteen months and covered the elaboration of the design proposal and the procedure of gaining accepts of proposed design from the responsible institutions. It ended with a “breaking point” when public discussion on the old trees destiny was organized by the Greenery Inspection of Riga City Construction Board. The third is a post phase into which the project enters after the “breaking point”. This phase of “latent” actions of low intensity remains the status quo of the project until now (for already two years). All phases differ in goals, nature of intervention, intensity of their involvement, intensity of interaction, mood (the prevailing psychological state) and the dynamics of mood transformation.

Why has the “high initiative” not reached the set-up goal, having the most of necessary conditions to achieve it: joint “political will” on national and municipal level, institutional means, allocated finances and, in the beginning, at least indifferent reaction (it means there were no protests or dissatisfactions from the residents)? Several explanations are possible. We see the application of the Bourdieusian concept of Habitus as an effective tool for understanding this complex, seemingly “irrational” development of the case. Conversely, the case of a small, but environmentally, symbolically and spatially complex strategic project taking place in a post-Soviet planning context contributes to the further elaboration of the concept of Habitus as an effective tool for understanding this complex, seemingly “irrational” development of the case.

WHAT HISTORY SAYS
As other Soviet countries, Latvia too regained sovereign-ty and established a free market after the collapse of the Soviet Union in the 1990s. Its capital, Riga, had to transit from the industrial type of social city to the post-industrial model of spreading agglomeration which consequently led to structural changes. This transformation potentially transformed the art of social life of the last 50 years. Absence of understanding and culture of communication in the new political and economic conditions were the dominating signs of the communication of the day, and professionals were not at all interested in how the “social subject met this “time of metamorphoses” (Roze, 2004) without the necessary skills, planning education and professional experience. Several reasons could be provided, some of which are relevant even today, e. g., the network of planning institutions after the disappearing of the centralized, top-down “Moscow” planning system to which they were connected, was drastically transformed. A quite different situation was the case of the political system, where the Soviet system of political administration (SOVA) was established instead. Aiming to cope with the new challenges of a free market economy and a democratic system of government, it nevertheless retained the traditional inner structure going back to its Soviet functional predecessors – Riga Architecture board (Rigas galvenā arhitektūras pārvalde). Secondly, the few professionals with an education in planning who had started their professional careers after the Second World War, at the moment of the “Big Fall” in the 1990s had reached the age of retirement (Le Bourhis, 2012). Culturally oriented, for these Soviet planners, they were not skilled for the planning of the free market environment nor able to communicate adequately with the “new tribe” of urban actors - new type of political leaders, social entrepreneurs, new type of public space users and the common people. This is particularly true for the professional class, the middle class, the “class of the middle classes”, with a strong regional, even bohemian Soviet intellectuals from architecture.

The period of Latvia entering the European Union, in 2004 can be called as “the time of metamorphoses II”. It brought to the realm of planning (not as visible as in the beginning of 1900s but even more imperative) “top-down” changes in legal instruments as well as the “bottom-up” national activities, impelled by apparent possibility to access European Structural Funds. EU policies in the realm of spatial planning such as European spatial planning Charter (ESP), European Spatial Development Perspective (ESDP), the EU strategy for the Baltic Sea Region (especially) and related actions (e.g. INTERREG) have had substantial influence on the national planning strategies and projects (Faludi, 2004; Sāleja, 2011). However, the adaptation of these policies and strategies, which were “naturally” born from the socio-economic and political circumstances of “locomotive” countries and were raised by their social and political forces, did not, and still does not occur in a “natural” manner in Latvia. Compelled to deal with a free market of a neo-liberal economy, the professionals of planning and architecture are in-between two “waves” of rapid land-use based planning rooted in RPM and aesthetized architecture coming from the long Soviet period, and less than a couple of decades shared spatial perception of urban development from the European nowadays.

As any urban space, Riga’s centre public space is also mirroring these metamorphoses. Although recently the city’s governing structures, formerly very well known for their lack of interest in common and social interests have undergone a vast transition process and are today new body – Riga City Development Department (RCCD) to recognize the urban regeneration, the quality of these public spaces remains unsatisfactory.

Riga historical centre (RHC) is a unique ensemble of “significant universal quality”, protected by UNESCO. Having lived through the national revival in 1990-s, RHC public space bears the signs of this romantic and emotionally coloured time: 1992 the intensively used by traffic space was transformed into car-free zone [1]. However, this transformation remains the only significant one during the whole time of Latvia’s independence, leaving the upgrading of Riga’s old downtown behind the centres of the other Baltic States’ capitals: Vilnius (Lithuania) and Tallinn (Estonia). Among several strategies of urban interventions these cities are focusing also on the renovation of their centres: Gedimino prospect in Vilnius [2], Rotternanni kvartal and Freedom square in Tallinn [3].

A significant number of international workshops, seminars, contests and plain-airs were organized to develop large-scale real estates and to provide expertise in urban development. RHC was a focus of most of these activities. Among them are several international contests, elaborated strategy of public spaces of RHC, study and proposal for the central area of the city conducted by “Gehl architects”.

![Fig. 1 Place in the front of Hotel de Rome in 1950-s and nowadays. Historical photo D. Gedzjuns](image-url)
The Bourdieuian concept of habitus helps to overcome the difficulty of approaching the intangible nature and outcomes of everyday urban practice. As to organize urban project is real, an efficient relationship with the world, where the world reminds the practitioner about itself in everyday micro-routines, as well as rituals programmed by practitioner, affect the urban rituals in the wild. The rituals of urban project are determined by rational, predictable factors - legal procedure, time, legally responsible participants. It is stable, in change, the moment when the practitioners produce, it is unconsciously targeted, but does not require the skills to achieve the target, it is collectively governed, it has a set of unspoken and unwritten rules and regulations. Objectively following the rules and the order, habitus nature however is not that of machine: producers practice doesn’t react on stimuli automatically. 

Obviously the weakness of the planning system, the absence of an integrated approach to the city development, the lack of political interest in public space, land-use based planning principles are to be named as explanations for the inefficiency of the existing system. However, it would be wrong to take all the aforementioned factors for reasons because of their clear symptomatic nature: they all are the tangible articulations of intangible complex processes and relations.

Obviously the weakness of the planning system, the absence of an integrated approach to the city development, the lack of political interest in public space, land-use based planning principles are to be named as explanations for the inefficiency of the existing system. However, it would be wrong to take all the aforementioned factors for reasons because of their clear symptomatic nature: they all are the tangible articulations of intangible complex processes and relations.

The very act of recognition (and acception) is neither officially required nor supported by habitus: agent or group of agents have to “decode” the set of unspoken and unwritten rules without and mostly against the system of particular habitus. The process can be described as “systematically disordered communication” (Sager, 2006: 223), involving permanent tension, which started to increase in the beginning of the second term and brought to legal relationships between city administrations and winning team have started. The modus of this process varies from open display of negative collective emotions to rable latent confrontation. The “old” RPM habitus of everyday administrative routine involved agents, supported by the power of leading position and big arsenal of legal instruments was confronted by “young” CP habitus of subordinated status, however desire and activity of the agents. This confrontation, decelerating the process and extending planned for the designing time, brings changes into the practice and representations of both habituses. Creating experience, it approximates the views, positions, perceptions of the involved into communication, increases or decreases symbolic reputational capital of the agents.

WHAT TO DO

Bourdieuian concept of habitus, yet helping to overcome duality between synoptic and participatory views on community practice, e.g. between activity formation characteristics and the processes by which activities are enacted, however approaches the practice “from outside”.

The interaction of two habituses - of RPM and of CP – was not that harmonious. The process can be described as “systematically disordered communication” (Sager, 2006: 223), involving permanent tension, which started to increase in the beginning of the second term and brought to legal relationships between city administrations and winning team have started. The modus of this process varies from open display of negative collective emotions to rable latent confrontation. The “old” RPM habitus of everyday administrative routine involved agents, supported by the power of leading position and big arsenal of legal instruments was confronted by “young” CP habitus of subordinated status, however desire and activity of the agents. This confrontation, decelerating the process and extending planned for the designing time, brings changes into the practice and representations of both habituses. Creating experience, it approximates the views, positions, perceptions of the involved into communication, increases or decreases symbolic reputational capital of the agents.

WHAT TO DO

Bourdieuian concept of habitus, yet helping to overcome duality between synoptic and participatory views on community practice, e.g. between activity formation characteristics and the processes by which activities are enacted, however approaches the practice “from outside”. The
"dance of habituses" in the Castle Square project was not a cool, indifferent rehearsed performance. It fully involved "games of power", heavy positive and negative emotions, breaking and establishing new relationships, creating new experiences, motivations, ideas and patterns of behaviour. In order to approach the inner dynamics of habitus, the concepts and theories are needed, which can consult the research on how to deal with human dimension of affects: feelings and emotions.

For further investigation the framework can be designed to assess the interaction between the cognitive and emotional components of groups' relationships and their manifestation in decision-making and spatially extended action of the communities of agents, involved in the process of urban project. Combining the concept of habitus from the political sociology of Bourdieu with concepts of territoriality from human geography, social identity theory from urban sociology and of cognitive appraisal of emotions from social psychology, it is possible to shape a conceptual framework from which to analyze the tacit dimension of urban planning which goes without saying beneath the level of rational ideology.

The theory of territoriality, offers an explanation for the mechanisms of human behaviour responsible for conflicts or hypertensive run of the project; application of the social identity theory explains the ways how groups of stakeholders categorize themselves during the project's procedure, shaping themselves into communities; socio-psychological theory of cognitive appraisal of emotions, combined with the theory of social identity, provides methodology to handle collective emotions and their impact on the run of the project.

**Notes**

1. The letter of the President of Latvia. Nr. 131. 2008.17.04. Copy from private archive of the atelier ALPS

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[May 2012]


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Landscape and urban development is an ongoing process - series of changes, its rise and fall for which people are the driving force. The common attribute of any human of any time in any part of Europe is the fact that they live in an environment, which together form the natural and cultural conditions of the nearer or broader area, generally called landscape. Landscape - one space that is perceived as something that you need to know and what you need to understand for one simple reason: live there.

Dynamics of human's relationship to the landscape and its feedback is the biggest difficulty of the definite and universally valid definition of landscape.

What is the very meaning of the term landscape and what is its significance? Questions may be many, the answers maybe even more. Subjective perception and interpretation complicate the situation. How could such ambiguity arise?

The term ‘landscape’ in Europe probably formed differently in each language (from other sources, at different times). It can be assumed that the term ‘landscape’ corresponding to its contemporary significance is formed differently in the Romance languages, Germanic or Slavic. In Czech, respectively West Slavic language environment it comes from the Proto-Slavic word ‘kráj’ (Rejzek 2001) - clearly defining their functions. Landscape in this sense means the area defined by its edge - the limit beyond which ‘something else’ begins and what is not included in our space defined by the visible edge. It also seems that the concept of landscape in the Czech language environment is very a ‘young’ word that began to be used in the second half of the 19th century (Cílek 2007). Probably the best explanation of this expression is in the language group of Anglo-Saxon-Germanic. The term landscape is known from the 7th century (Schroevers 1982). Its origin derives from the early medieval language environment. The ‘Landschap’ term derives from the combination of a noun ‘land’ and a verb ‘schepper’ (create, make, cause, collect). The combination of these two words should therefore probably express that it is a space where something is done with the land.

During every historical period a different, historically and culturally specific human’s relation to the landscape has developed. The main trait is the gradual transformation of natural landscapes in the cultural. In modern terminology, one specific model of land use describes one specific culture and historical period, and depends on: physical-geographical conditions of each territory and its changes; conditions and development of natural elements of the landscape; level of demographic trends in different historical periods; degree of social, cultural and economic development of society, the level of knowledge about the landscape and its use, the level and application of technology in land use.

Today we see the landscape in a comprehensive sense and we interpret it as an important part of existential framework and environment of contemporary man. The efforts of modern science to describe the landscape and this constantly changing space in detail and in the whole, characterize its content and understand its ongoing processes, can be understood as an effort to grasp and understand complex contexts of human existence in it.

The landscape is dynamic, complex, multifunctional phenomenon - a multidimensional natural and cultural space, the natural environment and the working environment of man. Its eventual change is the result of complex and interacting natural and spontaneous processes with planned human activities. Landscape, as living conditions, is also a means of raising people’s awareness and creating relationships to their environment and heritage, responsibility - especially in view of sustainable development. Landscape (cultural landscape), as part of the public interest, is the result of its gradual reorganization in order to appropriately adjust its use and spatial structure to changing social needs.

There are many definitions and answers to the question: “What is the landscape?” The European Landscape Convention offers one possible answer: we are the landscape.

EUROPEAN LANDSCAPE CONVENTION (ELC)

NEW LANDSCAPE INTERPRETATION

Awareness of the value of the landscape has received an increasing level of attention in the past decade. The role of landscape is not only seen ecological, it is also connected to social, cultural and economic values.
Implementation of ELC in Czech Republic (CR)

The ELC became part of the Czech legal system following the ratification process on October 1st 2004. It has been published in its entirety, both in english and czech on January 24 2005 in the Collection of International Treaties of the Czech Republic (Order Article 8, Number 13 of the Foreign Affairs Communication regarding the ELC.

In its 13 year history, the ELC has initiated a wide range of studies on the European and National scale. Already in 2001, the Ministry of Environment has commissioned a legal analysis of the ELC implementation by governmental decision 1049 from the 30th of October, 2002, in which the ministers of Environment, Agriculture, Local development, Culture and Education were asked to do so.

The legal analysis assessed the level of preparation towards ELC implementation as satisfactory. Law 114/1992, concerning the protection and stewardship of environment and landscape, contributes to the formation of local cultures and... is a key element of individual and social well-being and... is a component of the European natural and cultural heritage, contributing to human well-being and consolidation of the European identity; landscape contributes to the formation of local cultures and it is an essential component of the European natural and cultural heritage. The active role of citizens in the perception and evaluation of the landscape also plays a role. The ELC, in its 13 year history, has been an important public interest role in the cultural, ecological, environmental and social fields, and constitutes a resource valuable to economic activity and whose protection, management and planning can contribute to job creation... contributes to the formation of local cultures and... is a basic component of the European natural and cultural heritage, contributing to human well-being and consolisation of the European identity;... is an important part of the quality of life for people everywhere: in urban areas and in the countryside, in degraded areas as well as in areas of high quality, in areas recognised as being of outstanding beauty as well as everyday areas;... a key element of individual and social well-being and... its protection, management and planning entail rights and responsibilities for everyone.

Preamble to the European Landscape Convention, Florence, 20 October 2000

The objectives of the European Landscape Convention

The aim was to create a document that would clearly define the meaning of the landscape as part of the European natural and cultural heritage as one of the fundamental components of the environment of contemporary human, the care and the manner of its use as part of modern culture. Idea of the Convention is based on a comprehensive and complex grasp of landscapes, based on the principles of sustainable development. To the economic, environmental and social pillars of sustainable development, the ELC adds another layer - culture. The Convention promotes cooperation, and state institutions of European countries to take action on local, regional, national and international level for the protection, management and planning, as well as the recognition of the value and importance of the landscape.

The subject of the Convention is the landscape as a whole: Convention applies to the entire territory of the Parties and covers natural, rural, urban and peri-urban areas. It concerns landscapes that might be considered outstanding as well as everyday or degraded landscapes. Landscape is an area recognized regardless of its uniqueness, because all forms of landscapes are crucial to the quality of the environment and citizens. Landscape deserves to be treated in the instruments of spatial planning. Landscape contributes to the formation of local cultures and it is an essential component of the European natural and cultural heritage. The active role of citizens in the perception and evaluation of the landscape also plays a role.

The creation of ELC in 2000 and its legal analysis has initiated projects under the guidance of the Ministry of Environment, with the aim to address issues that were pointed out.

Preamble to the European Landscape Convention, Florence, 20 October 2000

The European Landscape Convention (ELC) integrates concerns about the loss of landscape values and other qualities that are very important for individuals and society as a whole. The convention was adopted in Florence (Italy) on 20 October 2000 and came into force on 1 March 2004, with the aim of promoting European Landscape protection, management and planning, and organizing European co-operation in this area. The Convention provides basic guidelines in the field of landscapes, which are binding for signatory states in planning sustainable development within the framework of development policies, strategies, programmes, in sectoral and spatial planning and in international cooperation. It applies to the entire territory of the Parties and covers natural, rural, urban and peri-urban areas. ELC is a key element of individual and social well-being and contributes to the formation of local cultures and it is the duty of public authorities to define the economic, environmental and social pillars of sustainable development. The ELC was written. The final text was drawn in July 2000 in Florence, Italy, by the Committee of Ministers of the Council of Europe. As at 25 September 2006, 25 States had ratified the convention: Armenia, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Finland, France, Ireland, Italy, Lithuania, Luxembourg, Moldova, Netherlands, Norway, Poland, Romania, San Marino, Portugal, Slovak Republic, Slovenia, Turkey, Ukraine, the former Yugoslav Republic of Macedonia.

“Landscape means an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors.” (European Landscape Convention, Article 1)

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The aim is to ensure the quality of landscapes and public participation (Council of Europe , 2000). As an important part of quality of life, landscape contributes to the fulfillment of human and consolidation of the European identity. Landscape plays a role in the public interest, cultural, ecological, environmental and social spheres and constitutes a resource valuable to economic activity, particularly tourism. Technological advances with experiences in urban/spatial planning and global economic and climate changes can contribute to development for the landscape. While the citizens awareness of their responsibilities should contribute to maintaining the quality of the landscape, it is the duty of public authorities to define the general framework in which this characteristic will be ensured. The Convention sets out the general principles for implementation into national policies and the establishment of the international cooperation in this field.

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The weakness of the implementation can be seen in insufficient co-investment of individual laws and low level of coordination between separate Ministries which regulate or impact the landscape (Lipský, Nováková, Zdražil 1998). The creation of ELC in 2000 and its legal analysis has initiated projects under the guidance of the Ministry of Environment, with the aim to address issues that were pointed out.

- Research project R&D 640/6/02 “Ensuring the implementation of the European Landscape Convention in other activities of ME” (Weber et al. 2004), which provided further directions to the Convention implementation process.
in Czech Republic. One of its outcomes was preparing a draft “Strategy for accountability of Czech landscape, of the past, the present and the future”

• The requirement to identify the types of landscapes and evaluation was the impetus to call for a R&D project 640/01/03 “Typology of Czech landscape” (Low et al. 2005).

• A significant achievement was the creation of Landscape Atlas of the Czech Republic (2003-2010). Landscape Atlas is a summary and a comprehensive understanding of the landscape in the Czech Republic. The Atlas maps explain and document the changing character of the landscape throughout history. (http://www.mzp.cz).

• The lack of a coordinated landscape policy in the Czech Republic has been a focus for a new initiative of the Ministry of Environment of the Czech Republic in 2007. The main objective was to create a national landscape strategy. However, due to the numerous personnel changes and relatively vague concept this has not yet been implemented.

• In early 2009 a petition was created for a government resolution to support the implementation of the ELC, which urges that this document should effectively reflect not only the natural landscape and cultural capital but also the influences of historical landscape stewardship, pilot study in Nove Dvory - Kacina” (Lipsky et al. 2008, Weber 2007).

THE NEED FOR CHANGE

Landscape is not just a dedicated production facility, but a multidimensional natural and cultural space with natural environment, habitat and the working environment of man. Successive development of landscapes is the ability to integrate ecological, economic and socio-cultural interests in its multipurpose use.

Consistency between natural, economic and socio-cultural dimensions of the landscape is the foundation of national, regional and local landscape identity. Both the natural landscape and cultural capital are worthy of systematic protection and care under proper use and management.

Various recent government programs have decided to address this issue, however the main problem remains that the Czech Republic has not sufficiently developed awareness of landscape values as cultural objects and components of cultural heritage. Therefore, the problem lies in the insufficiency of legislation, unsatisfactory level of political decision making and sometimes even obstructive attitude of political parties and groups in decision making on matters related to land.
Landscape as a continuum: continuum in people's lives, connecting the past with the present and the future, has the means to survival and quality of human life. This awareness, awareness about the landscape and the relationship to it, is missing in our society and it is no longer possible to refer to the history of our country - the totalitarian regime and alienation.

The awareness that landscape exists and that we are part of this system is the first step to realize the modern landscape policy in the Czech Republic. This statement integrates the idea of landscape in terms of public interest (part of the culture) and the responsibility for it.

Knowledge is commonly distinguished from data and information. Data represent observations or facts out of context, and therefore not directly meaningful. Information results from placing data within a meaningful context, often in the form of a message. Knowledge is that we come to believe and value based on the meaningfully organized accumulation of information (messages) through experience, communication or inference. Knowledge can be viewed both as an object to be stored and as a process of simultaneously knowing and acting - that is, applying expertise. Therefore information creates the base for the knowledge and experience. Information is the most valuable asset of our society. However the information society distinguishes from the informed/aware society. We lack a general knowledge about housing, architecture, urban/spatial planning and sustainable development. The result of our fundamental ignorance is wasteful investment of our energy and especially unconsciousness. The space, where the national cultural level grows, is the family, followed closely by the education system. Education doesn't mean only the transmission of knowledge to future generations, but also the practical use of this knowledge, and especially to learn a sensitivity / awareness to our environment (and so the opportunity to decide the quality of life). The education has a fundamental role to play in personal and social development as one of the principal means to reduce ignorance and thereby available to foster a deeper and more harmonious form of human/landscape development.

Acknowledgement
I would like to express my special thanks to the people of the project `Architekti ve škole'.
Abstract
This article focuses on the fundamental role of the profession of landscape architecture in shaping contemporary cities and urban areas. It is also expressing the different perceptions of urban landscape and its position in the city hierarchy in post Soviet countries. Described research will be implemented on the conditions of Czech Republic.

Keywords
- Landscape architecture
- profession
- professional background
- urban landscape

WHAT IS LANDSCAPE
“Landscape” means an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors. And it includes both, built and unbuilt area within or outside the cities” (European Landscape Convention, 2000).

The word „Landscape“; was first used as an artistic expression to describe the painting scenery in 1598 and is directly linked with the invention of so called Claude Glass. Its meaning has spread since then and currently refers to space which surrounds us outside of the buildings. The definition of landscape has been legally established in The European Landscape Convention (ELC) since October 2000. It is the first international treaty to be exclusively concerned with all dimensions of European landscape and includes both, built and un-built areas within and beyond the urbanized areas.

Landscape with its temporal and spatial form concludes to high level of resiliency and flexibility. Landscape is not instant and can provide long term solution. Flexible adjustment to changing conditions is initiated with fast reaction which is providing conditions for further long term result (e.g. initial growing phases of pioneer trees providing shade in first years for further growth of shade-loving, long lasting species in next years). Landscape is surrounding us everywhere outdoors, in both, urban and rural areas and isn’t forming any type of boundaries but edges. That is why we cannot perceive it as an Emmential cheese with “urban holes in rural landscape” Urban fabric is woven within the landscape which links man made human environment with natural systems.

The term urban landscape is hardly recognized in post Soviet countries. In the Czech Republic we often refer to landscape as countryside, everything that is beyond the boundaries of cities and within cities, the term urban landscape is generally re-mastered and squeezed into “gardens and parks”.

WHAT IS LANDSCAPE ARCHITECTURE
Landscape architecture is even nowadays perceived as an ornamental art dealing with small scale areas such as backyards, gardens and ornamental flowerbeds with high level of detail. The operating area of this field started to change with the overall global change of the world and is related (not only) to the shift of inhabitants from rural to urban areas. The recent number of million cities increased from 350 to 500 over last 5 years and prediction is 800 million cities by 2050. This fact naturally means a massive change in existing urban settings and city planning. Recent and following issues and challenges in urban planning are so complex that no single discipline can solve them individually but with interdisciplinary teams where landscape architecture will play a fundamental role. This theory is not new and goes back to landscape architect Ian McHarg (professor at the University of Pennsylvania) who first stressed the importance of ecology training of landscape architects in his book “Design with Nature” (1969).

Here he proposed bold theory and a set of ecologically related planning methods. While the practical measures he proposed have been incorporated into subsequent design and planning practices, the theoretical implications have not yet been fully-realized (Mostafavi, 2010). One of the responses in recent years was the creation of various field amalgams such as landscape, ecological and ecological landscape urbanism.

Combining the spatial and temporal characteristics of landscape, we can assume that, in the words of GROSS.MAX studio: “Landscape Architecture is a discipline with its own domain (defining aspect is dealing and focuses upon process, transformation and duration). It has its own methods and techniques for research”. Research in landscape architecture is based on qualitative evaluation rather than on quantitative modeling.

Landscape architecture is the art and science of arranging land so as to adapt it most conveniently, economically, functionally, and aesthetically to any of the varied wants of people (Steiner, 2001).

A complex definition set in European conditions was provided in 2008 by IFLA (International Federation of Landscape Architecture) which says that: “Landscape architecture is an interdisciplinary field that comprises several major components: humanities, social and natural sciences, technology and the creative arts. Landscape architectural education is available at Universities, Polytechnics, and Institutes...”
Human environment was naturally shaped since hundreds years B.C. in more or less similar search for paradise on the earth. In the old continent the first mention comes from Mesopotamia and Egypt where people colonized river valleys and flourished human culture. In China, first mention comes from valley of the Yellow River, during the Shang Dynasty (1600-1046 B.C) and later relates to The Legend of the Isle of the Immortals from 4th Century B.C on Yuan-Jiang-Pengai Island. Later Europe undertook many different styles which changed and evolved over centuries, from ancient times to the middle ages when garden was inesparable part of the house, through the formal and mastered compositions of remanent gardens to relexed and natural english landscapes formations. Situation dramatically changed in 19th Century with industrial revo- lution and change of city life. First answer to unpleasant living conditions and new understanding of natural environment was the new design of Central Park in 1863 in Manhattan, New York. This design was based on European knowledge and experience, but with an American approach. The inten- tion was to create an ideal paradise garden with improved continuous circulation between the city and the park. As a first manmade Public Park it proposed to bring the atmosphere of countryside and small organized area. Within the field of Landscape Architecture, this was a breaking point that set ahead place making over a craftmanship. Frederick Law Olmsted, one of the author of the Central Park design and author of many other urban parks, was the first one who used term landscape architect to describe the whole process of designing. He adopted the word from Gilbert Liang Measart (1814) to describe a land Claudius Loudon and Andrew Jackson Downing (1841) in this new expression from Gilbert Liang Measart (1828), John Claudius Loudon and Andrew Jackson Downing (1841) in this new meaning.

- Scale (from private plots to regional areas)  
- Access (from private and closed to public and open)  
- Integration (from isolated ”objects” to integrated spaces)

Understanding of this shift is fundamental for contemporary position of landscape architecture in 21st century.

The field has started as highly specialized ornamental craftmanship with high level of understanding of plant material and its natural habitat. Over centuries it has evolved into a discipline with wide scope of knowledge and work. Landscape Architecture as an ornamental art has nowadays no substance.

CURRENT PROFESSIONAL SITUATION IN CZECH REPUBLIC

Along with education, professional associations started to perform and support the field with current research and uniting the general field requirements. IFLA (International Federation of Landscape Architects) is represented in our country by Czech Landscape Alliance (CZLA), which was established in 1985. The first scientific journal was founded in 1977 and was called ”Landscape Research”. In Czech Republic there are approx 180 (5%) landscape architects and over 3000 (95%) architects. To successfully obtain authorization and perform within the legally established professional association (Czech Chamber of Architects), it is necessary to study one of the following degrees.

List of universities recognized by czech chamber of architects as recognized to landscape architecture au-thorization

<table>
<thead>
<tr>
<th>UNIVERSITY</th>
<th>FACULTY</th>
<th>PROGRAM</th>
<th>FIELD OF STUDYING (MAJOR)</th>
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<td>MZLU Brno/ZF</td>
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<td>ČVUT Praha/FA</td>
<td>magisterský navazující/Architektura a urbanismus</td>
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<td>HŠR Hochschule für Technik Rapperswil, University of Applied Sciences, St. Gallen, Switzerland</td>
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<td>HSR Rapperswil University of Applied Sciences, Switzerland</td>
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<td>AVU Praha/Magisterský/Výtvarná umění/Architektura</td>
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<td>VŠB-TU Ostrava/FAST/Magisterský navazující/Architektura a urbanismus</td>
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<tr>
<td>Teknillinen korkeakoulu, Helsinki, Finland</td>
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<tr>
<td>Haute Ecole du Paysage, d’Ingenierie et d’Architecture de Genève, Switzerland</td>
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<tr>
<td>Teknologiska högskolan, Stockolm, Sweden</td>
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<td>Høgskolen i Bergen, Bergen, Norway</td>
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<td>Teknisk Universitet, Trondheim, Norway</td>
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<tr>
<td>Universität des Studi di Firenze, Italy</td>
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<tr>
<td>In Czech Republic there are three universities with degree in Landscape Architecture. Mendel University in Brno with both, bachelor and master level, Czech University of Life Sciences in Prague with both, bachelor and master level and Czech Technical University in Prague with landscape module on master level.</td>
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In the recent years there are 3 schools graduating with internationally recognized degree (International master in Landscape Architecture-IMLA), 6 schools recognized by IFLA with graduating with accredited master degree (Master in Landscape Architecture-MLA) and approximately 40 schools awaiting the IFLA recognition and accreditation.

IFLA

HR Hochschule für Technik Rapperswil, University of Applied Sciences, St. Gallen, Switzerland

IMLA

Haute Ecole du Paysage, d’Ingenierie et d’Architecture de Genève, Switzerland

University of Copenhagen, Copenhagen, Denmark

Teknillinen korkeakoulu, Helsinki, Finland

Birmingham Institute of Art & Design, Birmingham, UK

Leeds Metropolitan University, Leeds, UK

Università degli Studi di Firenze, Italy

In Czech Republic there are three universities with degree in Landscape Architecture. Mendel University in Brno with both, bachelor and master level, Czech University of Life Sciences in Prague with both, bachelor and master level and Czech Technical University in Prague with landscape module on master level.

CURRENT PROFESSIONAL SITUATION IN CZECH REPUBLIC

Based on the brief research from 2012, we may assume that the average number of landscape architects doesn’t dramatically vary from other European countries. What is recognizable different is the role of this profession in edu-ca-tional and planning processes, and average salary. Oth-er aspects that differ are legal organizations and their hier-archy, membership requirements, and years of practice for authorization. This subject will undertake a more detailed research in the near future.

List of universities recognized by czech chamber of architects as recognized to landscape architecture au-thorization

UNIVERSITY/FACULTY/MA or BA PROGRAM/STUDY PROGRAM/FIELD OF STUDYING (MAJOR)

AVU Praha/Magisterský/Výtvarná umění/Architektura

VŠUP Praha/Magisterský/Výtvarná umění/Architektura/ Magisterský/Výtvarná umění/Architectura a design

VŠB-TU Ostrava/FAST/Magisterský navazující/Architektu-ra a staviteľství/Architectura a staviteľství

TU Liberec/FFA/Magisterský navazující /Architektura a urbanismus/Architectura
The program degree description is to include the term “Landscape Architecture”. Other degree names may be used for related specialties such as “Landscape Planning”. The institution offering the program must be accredited to offer degrees by the governmental institutional accrediting body of its region or nation.

A first-professional undergraduate degree should be of at least four full-time academic years in duration. A fi rst-professional undergraduate degree should be of at least four full-time academic years in duration.

There is a designated program leader who holds a qualification in landscape architecture.
be used in education systems and practice. Recent planning trends are harmful to both, urban and social ecosystems and urban landscape social structure.

Acknowledgement

This paper is supported by CTU grant nr. SGS12/204/ OHK1/3T/15.

References


http://www.harvard.edu/historical-facts
http://stuckeman.psu.edu/larch
http://www.zf.mendelu.cz/cz/fakulta/historie
Nowadays, public space became a victim of our life and mirror of our lifestyle. To successfully fulfill contemporary public space requirements one has to be open minded and accept recent conditions which are changing unexpectedly and fast.

Second conference day was dedicated to three different topics (Public Spaces, Regeneration and Public River-fronts) with one common denominator which was public space. Identified issues differ from underutilization, spatial underdevelopment, missing urban concept and context to experimental application of foreign planning and evaluation models.

One of identified successful approach is to focus on existing human life with the respect to human needs and activities happening outside of the buildings. Advantage is to work with existing structures, respect existing context and observe community needs. Function is overtaking form if planned carefully respecting existing site conditions, cultural, social and economical background which result in possibly sustainable and resilient solution.

Martina Sarvašová
Why Do We Need to Transform Urban Planners Into Vision Builders?

Pavel Borecký

Abstract

Due to the disruptive forces of broken communication, responsibility and public interest, it has become extremely difficult to understand the core of the challenges, formulate effective solutions and share visions of urban development in public. Yet, globalization societies are nowadays characterized by intertwined economic, ecologic and demographic challenges calling for public attention.

Working on recent urban anthropology and community studies research projects, I have realized there are certain methodological gaps, untapped intellectual terrains and unexploited potential of Central European urban planning. In this paper I theoretically explore the sociohistorical consequences of functional differentiation and connect them with urban planning framework of Central European countries. While recognizing challenges for effective collaboration among scientific and public sphere, I propose three new tenets for beneficial urban development – transdisciplinarity, participation and revised notion of landscape.

In terms of the public sphere, principle of participation is essential because involvement in matters affecting people’s lives strengthen concept of democratic governance which is increasingly important in post-communist transformation. Moreover, in terms of the scientific sphere I encourage urban planners to acquire holistic system-thinking – transdisciplinary framework – and work collaboratively with other disciplines in order to solve complex tasks.

Since we have found that urban landscape works as the catalyst of identity construction and community belonging, through landscape transformation we can forge and maintain a sense of community as micro-level of social cohesion. I personally perceive it as the main goal of vision building. It can be done through careful identification, mobilization and facilitation of transformative action via the employment of local resources, citizens and all relevant stakeholders including transdisciplinary collaborators.

In conclusion, consistent, long-term and inclusive development of the urban landscape coordinated by a transdisciplinary team of vision builders and driven by collaboration of all social actors is an advanced power balancing process through which society may discover its future.

INTRODUCTION

Since urban planners of all times tended to shape surrounding environment while anticipating needs of future society, in current post-crisis climate change momentum their function, framework of methods and sources of understanding appear to be increasingly significant. However, no reliable foundations of future development can be laid without partnership and acceptance among public sphere.

What circumstances drive us to rethink urban planning in order to make it more viable, human, but at the same time, system-oriented?

How can urban planners contribute to the development of more resilient society?

In this paper I would like to theoretically explore sociohistorical consequences of functional differentiation and connect them with urban planning framework of Central European countries. While recognizing challenges for effective collaboration among scientific and public sphere, I propose three new tenets for beneficial urban development – transdisciplinarity, participation and revised notion of landscape.

While departing from background of applied sociocultural anthropology, I find fruitful at this point to expose my inner motivation for writing on the theme of urban development – transdisciplinary framework – and work collaboratively with other disciplines in order to solve complex tasks.

Since we have found that urban landscape works as the catalyst of identity construction and community belonging, through landscape transformation we can forge and maintain a sense of community as micro-level of social cohesion. I personally perceive it as the main goal of vision building. It can be done through careful identification, mobilization and facilitation of transformative action via the employment of local resources, citizens and all relevant stakeholders including transdisciplinary collaborators.

In conclusion, consistent, long-term and inclusive development of the urban landscape coordinated by a transdisciplinary team of vision builders and driven by collaboration of all social actors is an advanced power balancing process through which society may discover its future.

BROKEN COMMUNICATION, RESPONSIBILITY AND PUBLIC INTEREST

Industrial revolution of 19th century not only led to mass urban immigration but at the same time radically changed social pattern of all affected societies. Traditional knowledge tight to rural self-subsistent economy and independent production turned out to be inefficient for modern urbanized society. Rapid technological development and individualized market economy led people to functional differentiation serving as “social bound holding society together because people needed each other in order to fulfill their needs” (Durkheim 1997). State institutions were crafted becoming pillars of social order, notion of progressive era took its hold and life of the modern city seemed to be carefully designed mixture of forces.

Along with notions of post-industrial society and information society which have found the way into everyday speech thanks to works of Daniel Bell (1974) and Anthony Giddens (1990), the pace of communication and amount of information driven by introduction of Internet made us restless. Imagine your usual Monday morning at work. You start opening two e-mail boxes full of messages, one for work and the other for personal use, jumping from news webpages to Facebook and before you are to answer all e-mails it is already 11 a.m. and then there is time for a lunch break. Meanwhile at home your library is filling up with unfinished readings of must-read authors and to-do-list with postponed tasks. Norwegian anthropologist Er...
iksen called the process vertical stacking and, for instance, justifi ed by it lack of political visions at the turn of the mil-
lenium when one's "life stand still at a tremendous speed" (Eriksen 2001). Even though new tools were designed to save ... invest scarce time and money into collabora-
tion is therefore very low regardless existence of informa-
tional society.

Where broken responsibility ends, broken public interest prospers. E.g. Smetana Embankment is one of the most beautiful viewpoints for admiring the panorama of Prague: embracing Castle, Charles Bridge and Hradcany, but at the same time is an arterial road usually heavily congested by traffic. In 2013 it was experimentally closed for cars and limited to bicycles. In the opinion of some city transport technicians that was a success – various stalls and activities popped up and people started walking where once traffic jams had been ruin-
ing growth of the inner center. Although, it might have been a success for those who longed for a more livable city, the project revealed how fragmented and oblivious the notion of public interest is.

In order to decipher another source of disintegration, it is vi-
tal to look back on relatively recent economical transforma-
tion. In 1990 a freedom rush into Central European post-
communist reality and majority of population focused on increasing standards of living. Race has started, yet princi-
iples of liberal economy were too much self-oriented redu-
ing individual freedom to unlimited market exchange. Pre-
cisely in this sense politologist Petr Drulák (2012) warned that the political parties have really cultivated substance rather than content in which "social disintegration and expanding politics of disinterest among public".

Coming back to Smetana Embankment project, people who now possess ultimate status symbol of this winning race – automobile – do feel under pressure of Prague mayor's top-down approach. If future of the Embankment remains unclear, question is not only whether to retain status quo or transform road into promenade but how to wisely integrate disinterested citi-
zens as well as transform exclusive decision-making pro-
cess in order to achieve common well-being and maintain social cohesion.

Given the fact that functional differentiation literally frag-
mented our societies, yet simultaneously contributed to their complexification, the major challenge for urban plan-
ers is to embrace state of affairs and evolve towards hol-
tic way of thinking and willingness to collaborate. At this moment democracy is far more than just how empowered one ethnic group in Amazon might serve as valuable example that shows us the way to rethink foundations of the discipline.

SCIENCES, SURUÍ PEOPLE AND HYBRIDIZATION

As a social scientist focusing on community development of Indigenous peoples (Borecký 2012), I have encountered many stories of problematic power relations in between of dominant stakeholders and local communities. In order to protect their rainforest territory from illegal extractors Suruí people of Brasil equipped themselves with culturally and environmentally significant places into the ethnographic map and by doing so empowered themselves by the means of their perpetrators. Supported by the "Intelligence System Suruí" – a project of London-based Team (ACT) which provided them necessary training and technical solution, they can now more effectively on cultural heritage to younger generations as well as to nego-
tiate future development with any representative of the outside world.

"The monkey at the end of the creek is not going to tell you the name and history of a place. All the technology in the world is not going to explain to you the spiritual signifi cance of a spot. No, it is the old guy sitting at the back of the hut. He is the one with the knowledge. All of a sudden these old guys are being appreciated as tremendous sources of knowledge. And that is the reason why this selection of GPS, mapping empowered Suruí communities as it has become much more diffi cult to violate their right to give Free, Prior and Informed consent "before adopting and implement-
ing legislative or administrative measures that may affect them" (UN General Assembly 2008). Having shared map-
image of sociocultural reality connected to landscape pro-
derived indigenous leaders with far stronger political position things changed. Suruí people of Brasil not only entered Google Earth headquarters asking for more de-
tailed bird-view photographs of Amazon rainforest it could cause their territory to be assessed in a relevant and consequential way – against all odds, the resolution of modernized deliberative strategy.

Anthropologist Arturo Escobar coined this strategy with the term hybrid nature while describing relatively openess of local communities to translocal and transnational forces beneficial for the process of integration: "the systematic construc-
tion of nature into negotiation of cultural and political autonom
y (Halbich and Kozina 2012). Escobar's term has revolved around the view that much of nature is now ar-
transnational and translocal forces that are embodied in physical and social relations. Nature and culture are thus in fact hybridized as „cultured nature“ (Escobar 1999). Architects, urbanists and many others working with landscape now seem to look for the basic premises related to entities we call nature correct.

In order to support infl ux of holism into urban planning and all related disciplines, it is crucial to touch connections of the terms culture, landscape and from the perspec-
tive of Biersack, who distinguished between the "standard centered paradigm" (Biersack 1999) and new "integrative science" (Scoonoo 2009). Without a doubt, Biersack pre-
sented an important contribution of ecological sciences to the discipli-
ne's paradigm: "The reality that is generated through the conjuncture of nature and culture is anthropocentric: rooted in the activities and conceptualizations of human beings, a life-world, a term I use not merely in the phy-
ological sense but in the stronger material sense, with respect to a world-out-there that has been appropriated, acted upon, crafted, transformed, a world generated in and through human-nature interactions" (Biersack 1999). If we
are to adopt this perception looking at the life-world and re-thinking how we utilize and manage it, we understand that there is no “stable asocial nature which can tell us what to ... 1999) and we are well aware of the fact that nature-culture system must be examined as such not as autonomous units.

What is the message for urban planners here? Firstly, landscape served to Suruí people as demarginalizing catalyst of social cohesion. Secondly, anthropologist answered the call ... one-dimensional reality is very often false framework that cannot be in the field or wider social context.

TRANSDISCIPLINARITY: COMPLEX MINDSET FOR VI-
SION BUILDERS

Let me at this point present how to deal with complexity of cities, interdependence of the world and ever-growing knowledge universe. I will start with exemplification of ... diverge-range of stakehold-ers or culturally distinctive ethnic groups, we must assume that we lack a useful tool.

In 1996 theoretical physicist Basarab Nicolescu published the “Transdisciplinary Manifesto”. By doing so, he synthe-
sized main ideas of George Friedmann, Edgar Morin and Roland Barthes who in 1973 created first Center for Trans-
disciplinary Studies (CETSAS), today Edgar Morin Centre (EMC 2013), in order to cover fields of sociology, anthro-
pology and semiology. In the manifesto he established a distinction between multidisciplinarity, interdisciplinarity and transdisciplinarity offering the way how to move “be-
yond disciplines” (Nicolescu 1996). For sake of this paper I offer only brief definitions: “Multidis-
ciplinarity is defined as an approach that juxtaposes disci-
plines. Juxtaposition fosters wider knowledge, information and methods; Yet, disciplines remain separate. Disciplin-
arity denotes that our own understanding of the logically structured knowledge is not questioned. Interdisciplinarity crosses traditional boundaries between academic disci-
plines but does not enter the “other meth-
ods” (Klein 2012) (for more details see Klein 2004, 2012; Ramadier 2004). As we have already found out in case of Suruí people and development of ecological anthropology, one-dimensional reality is very often false framework that cannot be in the field or wider social context.

Spatial level: Through multi-generation participatory map-
ning Suruí children initiated relationship with indigenous culture through activity in their local environment - land-
scape. Quoting Escobar (1999), landscape as “cultured nature” is constructed space of symbols which in case...
governance (The Constitutional Council 2013) or urban development (The Smart Cities 2013). In terms of urban planning, renowned theorist John Friedmann already in 1973 labeled this process “transactive planning” saying that “the process of planning is too important to be left entirely to experts... (Planning) is not merely concerned with the efficient implementation of objectives; it is also a process by which urban planners may discover its future” (Friedmann 1973). Agenda 21, Paolo Freire, John Friedmann and many others arrived at the same conclusion: ability to participate is closely tied to human equality and social capital. Lesson two seems to be more apparent: If city is, again, people, we cannot underestimate the role of urban landscape in terms of identity construction and community belonging.

Bottom-up process: Suruí project employed action research method called participatory ethnographic mapping. Being involved from the beginning and having right to influence without any problems, covers what is indigensible, and changes what is vulgar and consumptive into an oasis... Landscape is the only thing left that can link a city together” (Koolhaas 1995). Lesson two seems to be more apparent: If city is, again, people, we cannot to underestimate the role of urban landscape in terms of identity construction and community belonging.

Successful vision building triggers participatory domino effect:

- Once urban development is inclusive to all stakeholders, it provokes their willingness to participate on the future change:
- Act of participation encourages an inner creativity and motivates people to directly collaborate on realization of the specific goals;
- Creative process of finding consensual solution teaches all participants how to discuss, understand and tolerate needs of others;
- Public interest leads to investment of economical and social capital of those involved;
- During the performance urban landscape is symbolically connected with shared feelings, experiences and stories of all participants;
- Transdisciplinary urban landscape generates happiness and common ground and builds sense of community as the people develop a close relationship and the feeling of responsibility to the locality, which they inhabit.

Successful vision building triggers a participatory domino effect: once urban development is inclusive to all stakeholders, it provokes their willingness to participate on the future change;

- the responsibility of the vision builder is to accommodate holistic system-thinking and establish mutual trust, creative community and equality among participants.

CONCLUSION

Even though we may identify the world we live in as globally interconnected network, ability and willingness to communicate, share responsibility and define public interest all the way across and beyond disciplines as well as across and beyond societies, is still underdeveloped; Yet, globalization is nowadays characterized by intertwined economic, ecologic and demographic challenges calling for public attention.

In this paper I present a functional framework for the improvement of urban planning in a Central European context. The framework consists of a redefined role of an urban landscape as a catalyst – landscape is the only thing left that can link a city together. If city is, again, people, we cannot to underestimate the role of urban landscape in terms of identity construction and community belonging. Vision building is at the same time means to identify, mobilize and facilitate transformative action via employment of local resources, citizens and all relevant stakeholders. The principle of participatory urbanism, as the title suggests, is based on the belief that feeling people’s strength the concept of democratic governance which is crucial in times of post-communist transformation. Consistent, long-term and inclusive development of urban landscape coordinated by a transdisciplinary team of vision builders and driven by the collaboration of all social actors is an advanced power balancing process through which society may discover its future.

Acknowledgement

I would like to acknowledge, firstly, my research partners Pavla Burgos Tejrovská, Lukáš Hanus, Michal Pavlásek and Markéta Slavková, all members of anthropological research team, and Markéta Slavková’s Vigorous dedication to human-centered development of the capital city. You are loads of inspiration for me. Last but not least, I am indebted to my family for neverending support.

“The voyage of discovery is not in seeking new landscapes but in having new eyes.” Marcel Proust
The article mentions manners that are currently observed in cities when it comes to small open spaces. The quality of development of urban green areas is low. Ordinarily, especially plants can be seen there and it does not guarantee a proper way of relaxation. The role of small lawns and squares is ignored, thereby needs of recreation and rest of residents are marginalized. Facilities such as playgrounds and outdoor gyms can be found only in large parks.

The purpose of the study was to define types of public green spaces of Nadodrze housing estate in Wrocław, as well as their function and the way they are used. In recent years large common green areas of the district were restored and provided with small architecture objects. In this process smaller squares and lawns were omitted. They are still seen as insignificant spaces. Yet major public greenery areas are placed unevenly and the eastern side of the district is missing recreational spaces. Planning documents call for using all of green spaces, but it does not correspond with the facts.

Developed small urban spaces relieve large parks and ensure equal access to greenery for all inhabitants. Shared space should be used by people and appropriately managed. Then squares become attractive, well-kept and therefore safer.

Keywords│Key phrases
greenery, square, Nadodrze housing estate

CONTEXT
Currently, it is observed that potential activities undertaken in urban green areas concern large parklands. Small spaces remain forgotten and their functional, social and environmental role is ignored. This situation also relates Wrocław. All modernization carried out within the city applied to large urban parks or squares, while small squares and lawns are neglected. However, those small spaces could be equipped with recreational facilities and become everyday rest place for people. Meanwhile new recreational small architecture elements are missing and if they already exist, then after a few years without further maintenance they decay. In this way quality of green areas is systematically reduced (Sobczak, Kozłowska, 2009: 195-202).

A topic, that is often overlooked in the context of the designing, is the variety of types of recreation. Young people have different needs than dog owners, children, the elderly and people with disabilities. Designing for various users is also thinking in terms of time - needs up to date for several decades, such as safe and stimulating spaces for children, may after some time give way to necessity of creating the passive recreation space (Shirley, 2005: 77-83, 91-92).

Open spaces affect the well-being of people: they can reduce stress and provide relaxation. Sociologically they influence human integration, improve safety and reduce aggressive behaviour (Chiesura, 2004: 129-138). These areas play the role of neighbourly parks - located in a small distance from home and therefore frequently visited and ensuring a sense of security thanks to location in a known area.

Proper connections between urban oasis would create a network linking open spaces. Then they would form a matrix in the urban fabric (Shirley, 2005: 77-83, 91-92), to which every citizen would have a free access and where he would find facilities that correlate with individual needs.

METHODOLOGY
The fieldwork was carried out between March and May 2013 in Wrocław. The subject of the observation was Nadodrze district, with particular emphasis on the walking route Staszic Square – St. Vincent Street - Ołbińska Street. The purpose of the study was to define types of public green spaces of housing estate, as well as their function and the way they are used. Based on the analysis of kinds of public green spaces, lower studies area of linked together small green spaces was selected. Then the state of development of squares and lawns was compared with the manner of development of restored adjacent areas.

NADODRZE DISTRICT – STUDIES

Historical development
Nadodrze estate is situated north of the centre of Wrocław (fig. 1). It was separated from greater district – Ołbin - in 1991. It belongs to so-called right bank Wrocław (Harsimowicz, 2001: 885).

Fig. 1 Location of Nadodrze district (orange area) in relation to city center (red point) (based on: http://geoportal.wroclaw.pl/www/index.shtml; access time: April 2013).

Nadodrze estate was included in the city limits at the end of 1808, after thedemolition of the town fortifications (Malachowicz, 1976: 52–54). Starting from the beginning of the nineteenth century, the district began to industrialize. It resulted in an increase of the number of residential buildings. The quarters were developed too intensively and living conditions were poor. The presence of industrial plants was deteriorating additionally the quality of life of the
The district was harmed by war significantly. About 30% of residential buildings vanished (Tomaszewicz, 2011: 92). In recent years the authorities have made an attempt to save the historic buildings and remedy the effects of years of negligence, which has deepened by the flood in 1997. In order to obtain funds from the European Union, “Support Area” was established in 2009 by the Wrocław Town Council. The housing area has been covered by measures taking into account the restoration of buildings, revaluation of the old trade route, repair of roads and revitalization of squares and parks (Zak, 2011: 187).

The urban development of the district is associated with the development of the system of green areas. History of Nadodrze public greenery dates back to the nineteenth century. The Slavik mountain of Staszic Park (1813) is an example of the green areas at the time, which were open space for walks of downtown people and it became a point of local interest after the construction of tenements (Bińkowska, 2011).

Present-day Strzelecki Square and Staszic Park were chosen for a new location of Wrocław exhibitions at the end of the nineteenth century. In 1881 the Great Silesian Industry was held on which one could move freely. It was isolated from noisy streets with free formed belt of high and medium greenery. This simple composition encouraged users to the spontaneous behavior and active recreation.

An interesting and deserving attention planning solution of that time is St. Matthias Square. This residential layout alluded with its form to English squares and was designed for more wealthy people. Besides, it was a strong accent composing the district (Kononowicz, 2011: 70).

Types of public green spaces

The green areas of Nadodrze vary in sizes (fig. 2). - there are parks, squares, lawns and natural monuments - and differ on spatial arrangement and functions (hence greenery which is a part of building plot, riverside boulevards and road side greenery). They have a thing in common - they are available to all users of the space.

The largest green areas of the district are two parks - restored in 2012 Staszic Park and founded after the Second World War Slavic Hill Park. The first one has been recently adapted to the needs of different users. The Slavic Hill is an artificially raised acclivity on top of which the monument of Liberation of Wrocław is located. There is only a playground for children.

Six squares were classified - these are historic sites by St. Matthias Square, Pomorska Street and Kaszubska Street as well as Strzelecki Square, which were revitalized and two squares located on St. Vincent Street. Within the housing estate eighteen lawns were observed. They are located all over Nadodrze district and differ in the degree of development - most of them are untapped areas separated from the surroundings by means of streets, where the spontaneous behavior and activity is allowed. There are also contemporary urban forms - for example arranged with ornamental grass - up to the comprehensively developed areas such as Wrocław Pioneer Square with its frontier station.

Another singled out type is greenery as a part of building plot - these areas were created as a result of breaking the elevation line with the use of the facades with a depth of one building. Within the district are three such areas. One of them is fenced and decorated with bushes and benches. The second one is partly arranged by the residents, which is not worthy of mention. The third one is isolated from the main road with bushes and decorative flowers.

Then there are riverside boulevards. These are Józef Zwiześecki Boulevard and Strażnicza Street, as well as boulevard along Bolesław Drobner Street and Jan Zikka Street.

Roadside greenery is often composed by lawns and less likely by band plantings of shrubs or hedges. In the places an interesting solution of the nineteenth century can be seen - the streets are wider, so that on one side, in addition to the pavement, green band with a row of trees and hedges is constructed. It is noteworthy that St. Vincent Street and Pomorska Street were designed in such a manner. Currently on Pomorska Street grows a narrow strip of bushes separating the sidewalk from the roadway. On St. Vincent Street car parks took the place of trees.

One natural monument is located on the Nadodrze estate - the common ivy (Hedera helix) covered by protection in 2003, with a trunk circumference of 54 and 77 centimeters. It grows in the backyard of one of the tenement house by St. Matthias Square.

Another important issue is classified in paper public green in terms of “Study of background and directions of spatial development of Wrocław” (Polish: “Studium uwarunkowań i kierunków rozwójowych Wrocławia”). In the document the Lawrence Gerson areas are mentioned. In the document it is also assumed that the “forest parks, small squares and lawns” should be equipped with leisure facilities. Since it is not possible that each housing estate would neighbour the park, it is recommended to plant with green “even small squares”. The important issue is also the formation of a backyard greenery, as well as complementing them with facilities for recreation. According to the strategy classified in the analysis lawns would become rest areas for residents of adjacent buildings.

Functions and land use of walking route Staszic Square – St. Vincent Street - Ołbińska Street

Designers, creating a vision of the site, should bear in mind needs of all people, who will use it. Younger children’s interests form in another way than interests of the youth or elderly. It is also necessary to respect the requirements of people with disabilities who are equal users of public spaces. It is important to determine the type of people who make use of area.

On the basis of observation the main groups of people, who in particular time period use public green spaces, were distinguished (fig. 3). In the morning these areas are usually the owners of dogs and people who take care about their fitness. Then people looking after small children go for a walk and the elderly, who prefer to rest on benches, can be seen. An increase in the number of school-age children can be observed in the afternoon. Adults come back from work at the time, and if conditions are suitable they have a walk on their way home. In the evening mainly young people stay in public spaces.
The study area is arranged with facilities for passive recreation and with utilitarian functions (Fig. 4). The lawn at the junction of Ołbińska and Jedności Narodowej Street is equipped with carpet hanger only. The whole area is surrounded by a low wall so that the access is cumbersome. The area is elevated above the sidewalk and that creates an impression of unavailability.

The public transport facilities determined the appearance of two lawns - except bus shelters with seats, there are bins and advertising column. On the northern side of small square comfort station is located and on the southern side are many kiosks.

The described squares and lawns are missing elements for active rest, but in the western part of the mentioned area this type of recreation can be performed in the adjacent green spaces. Square by Pomorska Street and Strzelecki Square as well as Śląskie Park have been recently revalued and equipped with standard equipment such as waste and dog bins or benches, there are also playgrounds for children and the youth, rollerblades tracks, skateparks and outdoor gyms. Lawns located on the eastern side are badly furnished and do not have in their vicinity any well-equipped spaces. It can be concluded that throughout the area the deployment of various functions is uneven.

The potential of discussed green areas is not completely used. Shared space should be used by people and, with a view to them, appropriately managed. Placing small architecture objects on squares makes that they become attractive, and so people begin to identify with these areas. The space is well-maintained, and therefore safer.

The next step in the revitalization of Nadodrze public spaces should be taking care of the equipment of small green spaces. Developed, they will relieve large parks and ensure equal access to greenery for all inhabitants of the housing estate.

**Acknowledgement**

This article refers to issues of master’s thesis: “The concept of development of small urban spaces according to the pocket park idea on the example of Wrocław.” written under the care of Marta Weber - Siwińska, PhD at Institute of Landscape Architecture, Wrocław University of Environmental and Life Sciences.

**References**


Using Sculpture, Principle of Common Links Between Art and Park

Katerina Despot, Vaska Sandева

Abstract

The art form of the park should be especially well planned colorful composition and organization of the facility in which all components - architecture, sculpture and vegetation are combined into a harmonious whole.

Sculpture in the park can be looked at from a purely artistic point of view and perception of the synthesis between sculpture art and park environment.

Decorative monumental forms of green space are presented mainly from architectural - sculptural works. The basic of the sculptures is their intricate architecture - sculpture composition. When it comes to the composition of the parks should have a plan in mind, the park's layout and organization of the colorful buildings, especially where all components - architecture, sculpture and vegetation, to be joined in a harmonious whole.

The criteria will be used to request basic sculpture in green areas, as well as a compositional means and means for achieving the harmonious whole, namely: utility and functionality, aesthetic impact, participation in composition, relationship with the environment, contemporary solution.

Keywords | Key phrases
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sculpture, park, environment, composition

Once one starts to talk about the garden and park art, it is always observed by a beautiful perspective, as a composition that feeds all senses, peace, relaxation, oxygen, plant distribution as well as functional and decorative elements, which turn the image of the garden into a memory resort.

Park art is spacious arts and creative activity of its creators and it is aimed at transforming the natural environment and its adaptation to the needs of the people, as a medium of populations, the labor, cultural activities, passive and active leisure time.

Basic building elements in architecture are stones, bricks, wood; for painting – color, for sculpture – the clay, plaster, stone and bronze, in music - musical tones, whereby for park art the natural elements are basic.

Landscape architects should deal with numerous elements, such as:
- Vegetation in different forms - ornamental trees, shrubs, flowers and ornamental herbs;
- Relief as spatial object;
- The soil, in addition to the environment of the vegetation growth;
- The stone and the wood as a material for architectural and park elements;
- Water - produces plasticity in steady state and in motion;
- Air - holder of the distance and the depth of perspective.

This wide range of building elements creates the complexity garden-park art.

The works of park art are considered as visual, similar to works of other arts. Unlike architecture, sculpture and painting, the park art provides a complex of hearing, smelling, and cognitive perceptive elements that significantly increase the emotional impact on people.

An important feature of the work of landscape architects is that the completion of one facility does not mean the end of work on it. The architect, the sculptor and the artist, on the other side, can achieve completeness of their work of art.

The continuous and to some extent risky growth of vegetation does not allow landscape architect to be sure in the final actual growth in the spatial, aesthetic and colourful effect. Time is a decisive factor associated with the consistent change of the look of the park art piece - a feature that is found only in the park art. The landscape architect selects them, breeds, maintains, shapes the future of plant groups and arrays and finally leaves its "final object", which is not yet clearly defined.

The key circumstance here is the constant growth of vegetation - which makes the result visible sometimes in decades and only then we are able to evaluate creative ideas of the author. In fact, park facilities can never be regarded as finally completed, because within the course of their existence, they remain alive, constantly changing. This confirms that the creative formation of the landscape is a long and important phase in the process of maintenance of gardens and parks, and it largely determines the aesthetic appearance of green spaces.

Every historical era forms its own mixture of ideological and aesthetic productions and technological requirements.

Fig. 1. Compositional solution to the park
The asymmetry of the landscape style by changing the landscape at different times of the year makes the park an area where the human thought can be freely developed. When it comes to free open composition in a park, many parts needs asymmetry in the creation of the composition with a special reference to the emphasis as an important segment of the designer's creativity. Sometimes, the choice of emphasis can develop the whole composition which is subject now to special review. Sculpture is the major emphasis on development of compositional solutions. Sculpture in a park can only have a decorative or we can talk about parks with historic value where sculpture is the leading factor.

**EXTERIOR SCULPTURE AND ITS APPLICATION IN SPACE**

Range of issues that concern monumental sculpture of artistic point of view as it needs to fit the space and to provide synthesis between the exterior sculpture and the park and their interrelationship. Monumental sculpture planned for parks and gardens has its specific features that should be met.

- **The position of form towards the sources of natural or artificial light strongly depends on the shape, theme and material used.**
- **The distance to visually complete perception of a sculpture or for the whole composition of sculptures-the visualization is the most important element**
- **Sculpture should either merge within the park or should be allocated according to the motive of the sculptor and landscape artist**
- **The choice of the theme for the sculpture - could be from realism to total abstraction, inspired by everyday life, stylization of forms or complete theme previously determined for a particular park**
- **The color and the material have great significance in the in the artistic influence of sculpture in space and the idea of the environment and the sculpture is a tool for the creation of sculpture.**
- **Sculptures in the park should be accurately determined for a specific park**

When placing the sculpture in the environment it is of great importance the evaluation of the landscape architect who is the author of the project of a given park. Since the initial phase the sculptor and the landscape architect should specify and define places in the park that would have lost the power of influence without setting a monumental sculpture. These could be wide open meadows, axial streets that take the stream of people or quiet corners. An appropriate place for installation sculpture is also deep monumental perspective, whose importance can be stressed out with composition of sculptures. Another way to set the sculpture can be where the alley is separating, around a small mirror or water as its dominant or previously established niches of plants in order to clearly see the sculpture on the green background, but very often the very sculpture can represent a water-related element.

When it comes to free open composition in a park, many parts needs asymmetry in the creation of the composition with a special reference to the emphasis as an important segment of the designer's creativity. Sometimes, the choice of emphasis can develop the whole composition which is subject now to special review. Sculpture is the major emphasis on development of compositional solutions. Sculpture in a park can only have a decorative or we can talk about parks with historic value where sculpture is the leading factor.

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CONCLUSION

All these foreseen conditions for creating conceptual design start from a closed curved line. Each of the complementary elements create the visual image in terms of composition, but the complementarily of gender composition and all the functional elements by the landscape architect closes the composition and remain space for interventions by many generations.

The form of sculptural plastic is a question of priorities of any author, sculptor and this issue is aesthetic, philosophical, social and historical. Each sculptural form should have qualities that need to connect with the surrounding park. This is achieved by analyzing the above mentioned conditions, which adapt the environment for experimentation of creation.

Sculpture in park can have only decorative purpose or we are talking about parks with historic value where the sculpture is the major factor.

Acknowledgement

Gratitude to university Goce Delcev - Stip, R. Macedonia which contributed to the appearance of the paper

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Status, Problems and Trends to Address Green Space in Skopje, Macedonia

Vaska Sandeva, Katerina Despot

Abstract
The landscape is an essential component of the natural and cultural heritage and sustainable development, especially for balance and harmony between social needs, economic activity and the environment.

Skopje city is the capital of the Republic of Macedonia and it is of a great importance for economic and social development of the country. As the largest city in Macedonia is designated as an interesting subject for research opportunities for sustainable development of green areas.

It takes a man to be a specialist to see the role of green spaces in cities. The presence of green areas is of great importance to the quality of life in every township.

The main aim of the report is to assess the condition of the green area of Skopje in recent years, to instantiate problems and tendencies to solve the green areas.

Keywords | Key phrases
Landscape, park, green space, sustainable development, composition

“Green urban system and other settlement is a set of functional - and planned volume - spatially associated parking - urban units (public and serving green areas) within the village and surrounding territories meeting the quantitative parameters and qualitative indicators. Green system with specific natural and anthropogenic conditions provides biologically active part of the living environment of man and his society, the link between individual elements and structural zones of urban organism to its environment and provides ecological and aesthetic environment for various human functions”.

The modern state of green areas is influenced by the lifestyle of today’s civilization, the rapid development of industry and the destruction of green space. That is why the existence of green areas is a significant factor and limits the high quality of life in urban environments.

Macedonia is located in the central part of the Balkan Peninsula. According to the territorial organization of the country, Skopje (figure 1) is the capital of the Republic of Macedonia, municipal center of the country and it is concentrated political, economic, cultural and educational activities.

Fig 1. Map of the City of Skopje

The city is situated on both sides of river Vardar which divides the city into two almost equal parts.

This area is of great importance for Macedonia because of a number of factors:
- Favorable geographical position
- Presence of natural and anthropogenic resources for tourism
- Existence of rich cultural and historical heritage of different eras
- Existence of good infrastructure construction
- Established and built a settlement

The diversity of the relief on the ground has great influence on the development of the capital Skopje. Today, there live almost 500,000 inhabitants, a quote of the population of the state. Over the years a distinctive rapid demographic growth.

By studying the statistics of population, area of Skopje and green areas of the city of Skopje made various grades. General statements in favor of forecasts for future development of green areas:

The city of Skopje is 7088 ha, greenery covering 649.89 ha (green areas for public use, green areas for limited use and green spaces for special use).
- Green space for public use occupies 378.53 ha.
- Green areas for limited use occupy 144.96 ha.
- Green spaces for special use occupy 126.40 ha. These include the zoo nursery, botanical garden cemetery.

With a population of 467,257 inhabitants of Skopje and a total of 649.89 ha of green areas are falling 13.9 m2 / h.

The territory of Skopje is divided into 10 administrative acts. Today Skopje is characterized by uneven distribution of the elements of green systems.

The data show that most occupy much of the green areas in the municipalities Karpash - 24%, Centre - 12% Kisela voda - 15%, Chair - 11% and Gazi Baba - 12% which is due mainly to the territory of these municipalities distributed mostly in central urban area and the existence of parks.
Small green areas take part in Suto Orizary - 1%, Gorece Petrov - 3%, Airport - 7%, Butel - 4%, Saray - 2%, here the reasons are lack of parks, gardens and squares.

With proper shaping of the green system and solve a few basic groups tasks: biological-ecological, recreational and aesthetic.

In the broadest sense echo-biological task of green system was comprised in: improving the microclimate conditions in the urban part, providing good ventilation and air exchange the western direction; stimulate penetration of mountain air from the south (mountain water) in urban tissue.

Analyzing the current state of the Skopje green system can determine that it does not fully meet the above mentioned tasks. The main reason can be found in low-elective and physical construction of the system, the lack of specific and purposeful arrangement in and around production fields, river courses, and the imperfect structure in terms of autonomous volumes of each element of the green system.

Recreational tasks of the green system in the first place consisting of ever green areas are considered as a medium for entertainment, but fully functioning recreational needs several conditions. The assessment of the current situation shows that the possibilities of green system to address recreational tasks in terms of Skopje are not used fully.

This lack stating the following:
- Do not use all opportunities along the Vardar River to organize daily and weekly rest;
- Zaichev Hill and Gazi Baba is treated as important centers for recreation;
- Not provided functional and territorial relationship between urban and around town green areas for recreation.

The green systems are resolved and aesthetic objectives. They have significant for the city and should be required in spread the natural framework of the city (fences Moutain Vodno, Skopje Montenegro etc.) The emphasis river Vardar Skopje only natural for granted, in shaping the identification of sectors in the urban landscape through the selection of specific plant species composition and spatial composition, to create comfort and representation in public centers, through various forms of regulation and park furniture.

To avoid a total urbanization of Skopje should address serious attention today and in the future in relation to the development of areas including:
- Exposure of green lands and landscape and to enhance the role of tourism;
- Exploring the role of cultural landscapes appreciated and implement regulations to protect;
- Reconstruct of green spaces in order to stop the negative development environment as a whole;
- Lying of care and attention to the park memorials appreciated art;
- Preserve and protect existing green spaces;
- A ban on the construction of green buildings in areas inconsistent with the main purpose of the park;
- Planting vegetation on all the free spaces in the city;
- Increasing the green areas along rivers;
- Construction of linear green space on the boulevard and streets;
- Performing enrichment activities dendrology composition;
- Construction of new parks and gardens;
- Providing buffer zones around production areas.

To improve the environmental conditions is required:
- Implementation of landscape planting and reclaimed the disturbed areas with appropriate tree and shrub species;
- Enrichment plant species of all elements of the green system in accordance with the environmental requirements to them:
  - high summer temperatures and dry air;
  - soil moisture and air;
  - proper selection of plant species in accordance with the specifications of production processes;
  - recovery of streets with appropriate species.

The second group of tasks, which also depends on the development of the green system is linked to the demand for funds to improve the performance of planting areas for living, working, recreation.

Functional system of living
Habitat in need of fresh air. Therefore, the residential areas should ensure the deepest penetration of the local wind associated with the surrounding mountains. This can be done by wide boulevards, directed radially from the mountains to the city center. Improvement of indicators landscaping in residential zones may be achieved by: increasing the green areas, a forestation of free and low built-up areas, landscaping exempt from production activities in residential areas, increase of street and yard landscaping, especially in the set new extensions.

Functional work system
Improvement of indicators of improvement in the areas of labor could be achieved through: separation of work areas from residential zones by green protective zones, including industrial sites as part of the urban green system, proper selection of plant species-specific production processes.

Functional relaxation system
Improving landscaping in recreational areas associated with meeting the following general conditions: the formation of specialized recreation areas in areas with the highest recreation assessment, but in terms of environmental protection, spatial targeting and positioning of objects the individual subsystems of recreation and consideration of compatibility between them and elements of the green system performing spatial and compositional relationship between urban and recreational areas around settlements - i.e. around settlements forests are a potential resource for recreation, which should be linked with the green system the city of Skopje. (Vodno, Zaychev Hill Sports recreational center “Saray”, etc.).

The improvement of the structure of the green structure can be accomplished in several ways:
1. Establishment of the green system as a means of connecting the urban area with around settlements.
2. Improving the structure of the elements of the green system (promoting quality parameters) via: reconstruction of existing facilities, the green system, paying attention to ag-ing trees and shrubs; renewal of vegetation in the streets with suitable gas-tight species, planting of roadside easements and strips off water flows with appropriate tree and shrub vegetation, development of spatial and landscape projects for the sites of the green system.

Useful for improving the structure of the green system is the formulation of urban development model of the system (within the compact city) (Figure 2) developed and proposed by us, which includes the following statements:
- Accepts river Vardar as an important element of the green system of Skopje, which provides a green corridor to the east - west;
- Consider the existing City Park as an element enriching the green system of Skopje;
- Available to anticipate and build protective vegetation belts with a width of 15-25 m along the road transport communications;
- Available to plan buffer strips of forest plantations near water channels (10 m);
- Accepts new parks Gazi Baba and Zaychev Hill as supporting elements for the development and completion of the system of green links between them and the mountain water;
- Available formation of public green spaces - gardens.

Functional work system
Improvement of indicators of improvement in the areas of labor could be achieved through: separation of work areas from residential zones by green protective zones, including plantings in and around industrial sites as part of the urban green system, proper selection of plant species-specific production processes.

Functional relaxation system
Improving landscaping in recreational areas associated with meeting the following general conditions: the formation of specialized recreation areas in areas with the highest recreation assessment, but in terms of environmental protection, spatial targeting and positioning of objects the individual subsystems of recreation and consideration of compatibility between them and elements of the green system performing spatial and compositional relationship between urban and recreational areas around settlements - i.e. around settlements forests are a potential resource for recreation, which should be linked with the green system the city of Skopje. (Vodno, Zaychev Hill Sports recreational center “Saray”, etc.).

The improvement of the structure of the green structure can be accomplished in several ways:
1. Establishment of the green system as a means of connecting the urban area with around settlements.
2. Improving the structure of the elements of the green system (promoting quality parameters) via: reconstruction of existing facilities, the green system, paying attention to aging trees and shrubs; renewal of vegetation in the streets with suitable gas-tight species, planting of roadside easements and strips off water flows with appropriate tree and shrub vegetation, development of spatial and landscape projects for the sites of the green system.

Useful for improving the structure of the green system is the formulation of urban development model of the system (within the compact city) (Figure 2) developed and proposed by us, which includes the following statements:
- Accepts river Vardar as an important element of the green system of Skopje, which provides a green corridor to the east - west;
- Consider the existing City Park as an element enriching the green system of Skopje;
- Available to anticipate and build protective vegetation belts with a width of 15-25 m along the road transport communications;
- Available to plan buffer strips of forest plantations near water channels (10 m);
- Accepts the newly parks Gazi Baba and Zaychev Hill as supporting elements for the development and completion of the system of green links between them and the mountain water;
- Available formation of public green spaces - gardens.
and parks in housing estates - at least 20% of the total area of the housing complex. Urban development model of the green system of Skopje can be implemented in priority development of the green system by building new parks and recreation areas, mainly in the compact city.

Fig. 2. Urban development model of the green system (within the compact city)

CONCLUSION

Green system in the city is characterized by an imbalance in territorial extension. Collateralization city of Skopje with green areas does not meet the needs of people with green spaces. Green system in the City is characterized by uneven placement its elements in the territory. The problems associated with green areas are:

- Unregulated construction in green areas;
- Change of use of the river greenbelt;
- Unsatisfactory maintenance of significant green complexes: Gazi Baba, Zajcev Hill, parts of coastal regulation of the Vardar River and other rivers;
- Lack of functional spatial relationships of suburban water park, recreation Center - Canyon Matka, Sports Center recreation - Saray with City.

- The territory of Skopje there is only one park. To create conditions for sustainable development of the green system elements, so their defense is necessary normative perspective (special) file system for green. Sitting and landscaping areas to live, work, and leisure are essential for architectural, artistic and aesthetic and cleared and improved performance indicators for landscaping areas to live, work, relax, relate to: providing enough green areas within the zones of residence, work, recreation, construction of green belts to separate work areas from residential zones, providing enough space for relaxation, providing a connection with urban vegetation around settlements (Vodno, Zaychev hill, Saray, Gazi Baba), construction of new parks and gardens.

RECOMMENDATIONS

1. The future development of green areas and connecting them in a green system should be carried out some important events, such as effective use along the Vardar River and adjacent areas, and prevarshtaneto them a key element of the green system, creating conditions for a variety of functional use of the river, construction of facilities for the needs of different sports and recreation along the river, as well as facilities to improve water quality.

2. To improve the environmental conditions is necessary to:
   - conduct landscape a forestation and reclamation of disturbed areas with appropriate tree and shrub species;
   - enriching the species composition of all elements of the green system in accordance with their environmental requirements;

3. To improve the environmental conditions necessary: pursuing landscape a forestation and reclamation of disturbed areas with appropriate tree and shrub species, enrichment of the species composition of all elements of the green system in accordance with their environmental requirements:
   - air quality, high summer temperatures and drying air, soil moisture and air, and weather conditions of the urban environment (track width of sidewalks, the height of buildings, the orientation of the street, etc.), specific production processes in industrial zones, renewal of vegetation streets gazustoychivi appropriate species.

4. Research and planning of the green system in different territorial units (municipalities) will help control even distribution of green areas in the urban area and achieving the satisfaction m2/inhabitant.

5. Creating the conditions for sustainable development of elements of the green system in order to protect them in the future, requiring authority (special) paper green system (laws or regulations of the green system of capital and major cities).

Acknowledgement

Gratitude to university Goce Delcev - Stip, R. Macedonia which contributed to the appearance of the paper

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Urban Permeability: On Plants and Plinths

Veronika Kovacsova

Abstract

The human civilisation is becoming ever more urban. With the growing densification in our cities, green and open (public) spaces are put under pressure. As the number of built, non-permeable surfaces (such as asphalt and concrete) increase, storm water absorption, biodiversity and a pleasant microclimate in our cities is threatened. All non-permeable materials contribute to extreme water conditions in the city (low ground water level or flooding) and to the so called ‘urban heat island’ effect. Alongside with this development, the number and quality of public spaces is put under pressure. How do we provide the necessary built urban environment (housing, infrastructure) of a growing city, and at the same time enhance and offer lively, inclusive public spaces with a comfortable microclimate?

In this paper, the concept of urban permeability is introduced, described and presented on the case of the city of Bratislava, specifically two districts which are contrasting and similar at the same time: the historical Old Town and 1970’s prefab mass-housing neighbourhood Petržalka.

Keywords │ Key phrases
urban ecology, resourceful city, post-communist urban landscape, Bratislava
urban open spaces, permeability, urban climate comfort, social change

The human civilisation is becoming ever more urban. With the growing densification in our cities, green and open (public) spaces are put under pressure. As the number of built, non-permeable surfaces (such as asphalt and concrete) increase, storm water absorption, biodiversity and a pleasant microclimate in our cities is threatened. All non-permeable materials contribute to extreme water conditions in the city (low ground water level or flooding) and to the so called ‘urban heat island’ effect. Alongside with this development, the number and quality of public spaces is put under pressure. How do we provide the necessary built urban environment (housing, infrastructure) of a growing city, and at the same time enhance and offer lively, inclusive public spaces with a comfortable microclimate?

Climatological factors such as sun, temperature, wind and humidity largely influence our behaviour in and usage of public spaces, and they even determine why we like to stay in certain places more than others. They have an effect on how we feel, how ‘comfortable’ the circumstances of being outdoors are. Human comfort is a subjective concept. In a public urban environment it has to do with people’s acceptance of spaces and their conditions. In this paper, I will introduce and highlight the concept of urban permeability, influencing not only human comfort but also climate resilience in urban spaces. On one hand the aforementioned open, breathing, absorbing and cooling green spaces in cities, on the other hand accessible, inclusive, lively plinths and the public space formed by and in-between them acting as catalysts of social interaction.

This paper focuses on two districts in Bratislava - Old Town and Petržalka. The urban fabric (built environment), like in many other post-communist cities, has to a certain extent gone through degradation. The city does not grow and develop hand-in-hand with its ecological and climatological processes. The surrounding green hills and vineyards are gradually turning into housing projects of private developers. The city does not have a central park, and only very few urban parks which are threatened to turn into asphalt squares or underground parking lots. Reduction in green permeable areas of cities is one of the main causes for the increasing urban temperature, poor storm water management and decreasing air quality. Also, the city currently does not have any legislative regulation on the protection of green areas in urban areas, as well as a economically sustainable strategy to create and maintain existing and new green infrastructure in the city.

What can a dense historical centre and a mass-housing neighbourhood learn from another

Two totally different areas in Bratislava are studied and compared (Fig. 1). On one hand, a dense historical centre (Old Town) with scarce porous spaces and a vibrant social citylife; on the other hand a 1970’s prefab mass-housing neighbourhood Petržalka with an excess of unused greenery, but a limited offer of vibrant public spaces for its inhabitants (Fig. 2). Both neighbourhoods have approximately the same density of inhabitants (around 4000/km2), however their urban fabric is totally different. Only 6% of the total surface of Old Town is open and green, while the European average is 35% (de Roo, 2011) within an direct urban living environment (Fig. 3). This dominant non-permeable surface area is supporting the development of the urban heat island effect. Density of functions (shops, cafes, ...) on ground floors is highest in the whole Bratislava and is a foundation of a vibrant urban life. Petržalka, on contrary, has a high amount of ground vegetation (about 68%) (Fig. 4), open corridors for fresh air to enter, but a deteriorating public life due to large distances between buildings, disorientated planning and marginal social functions on ground level for people to pass by and meet. In this paper I will investigate how these two neighbourhoods can reinforce themselves and identify measurements that can be taken to fix the missing social and microclimatological links in their urban fabric.

![Fig. 1 Location of Old Town (north) and Petržalka (south)](image-url)
Learning from Old Town: urbanity through social action

A study and book by the Dutch office Stipo, The City at Eye Level (Karssenberg 2013), suggests that public functions in plinths on a 15m distance (approximately 6-8 timer per 100m) contribute to a liveable, socially interactive environment. Petržalka as a neighbourhood built in the 1970s – 1980s, is based on the principle of functional segregation. Although density of public functions within the plinth varies, a shop, restaurant or a school pop up every 30 – 70m on a main street (Fig. 5).

One can also experience a very undemocratic street-scape, where cars dominate on every sidewalk, and sometimes hinder any connection of the pedestrian with the ground floor (Fig. 6). As mentioned above, the area is characterized by an excess of green public spaces, which the planners originally intended to be used for recreation. However, today this excessive grass land is mostly used only for taking ones pet out for a wee (Fig. 7). Hence, in this case, quantity of green open spaces does not correspond with an equally high quality. On the other hand, the green is the most valued characteristic by the inhabitants of Petržalka, and protect it for instance against a top-down development of a highway.

The question remains: how can the vast green carpets be utilized by the inhabitants? And could nature possibly act as a catalyst of social change? Urbanity of the Old Town in Bratislava is achieved through density of the build environment and the number of public functions which bring people not only socially but also physically together. But when buildings in a mass-housing neighbourhood like Petržalka are sometimes tens of meters apart from another, it creates spaces difficult for social interaction - to see and hear one another from such distances. What could be done to form these spaces between buildings into a motor of social interaction while preserving the beloved ecological structure and pleasant climatological characteristics of the area?

One of the most important ingredients of urbanity, besides density, is active participation of the inhabitants in a community. During the socialist times in Slovakia, the notion of the “empowered” citizen was not common, as it resembled more someone’s private interest than the interest of a community. However, more and more people today are not only showing their increasing need to go out and meet in public spaces, but also demonstrating right and responsibility for public spaces.
 Why not to plant an urban (food) forest into the vast green lands (slowing down but not blocking the air circulation coming into the city) (Fig. 9), tree nurseries or playgrounds and sports facilities (with permeable pavement and bioswales to capture storm water)? When programmed well, the vast grass areas can act as incubators of social action: form a network of green infrastructure and attract people to access by foot or bicycle. The built environment would reconnect with the ecological and climatological processes of the city. Besides environmental development, green urban areas offer health and social benefits and are considered as community builders, strengthening the social ties between the citizens.

Learning from Petržalka: reconnecting urban with nature

Green, permeable surfaces form spaces in Petržalka do not only collect storm water (runoff storm water can be held up to 80%), but also cool off the surrounding urban spaces. Because the Old Town lacks these kinds of open spaces, a new strategy is needed to improve the (micro)climatological comfort of the city, but also to reconnect urban life with nature.

The most obvious method to introduce permeability is by opening sealed, non-porous surfaces in the city and adding new vegetation to support storm water collection, absorption, and contribute to a cooling effect during the hot summer periods. In the Old Town, the open places with a permeable potential are the unused empty plots, parking lots, tram tracks and roofs of buildings. During the last two years, the first community gardens have been set up in Bratislava, on both public and private grounds. Many of them have been initiated by active citizens who have decided to take things into their own hands and transformed empty, unused voids in the city into a new public space for the people, a permeable space allowing water absorption and a green space offering shade and a cooling microclimate.

The city administration and the citizens have to realize that it is never too late to improve their urban environment, and the scale of the interventions into the existing urban fabric does not have to exceed a couple of m2. Where there is no space for larger green areas, a solution of let storm water run-off or to be stored would be a simple tree-bed instead of a parking place (Benepi, 2013). Such rainwater pockets can store about 10,000 litres of storm water (Fig. 11). Also, a fountain or public drinking water tap can improve the human comfort during hot summer days in the city. Many of the fountains in the Old Town of Bratislava are out of order due to lack of finances for their maintenance. So is since 2007 the largest fountain called “Unity” on the Freedom Square (Fig. 12), which is considered in the hot summer days as one of the most unpleasant public spaces to be in the in the city. This square went through a number of transformations in the last two centuries, covering up 64% of its surface with heat-radiating and non-permeable asphalt and concrete. With small scale interventions like collecting storm water into smartly enlarged existing green surfaces, forming volunteering groups for park management, maintenance and repairing the fountain with the help of local volunteering plumbers and engineers, the park will become not only more lively, but also a cooler public space (Fig. 13).

Towards a resourceful and responsible city

Such a paradigm shift does not mean less care from the city administration’s side, but a partnership based on mutual responsibility and shared maintenance. It seems that every year the local municipality is cutting costs in maintenance of public spaces, resulting in transformation of green open surfaces into lower maintenance paved squares or demolished public elements or facilities such as fountains, pavement materials, benches. With the current economic situation and lack of finances, we tend to forget that we have at hand unused, even renewable resources: climatological (such as storm water, wind or sun energy) and social (sharing tools and skills). Setting ground and establishing public-private partnership could offer a new strategy for the city as a step towards a more resilient and resourceful city. The city would save costs by collecting storm water (less load on the drainage system and stored water to be used for watering the parks in the hot summer months) in the maintenance and create attractive cooling urban spaces, when existing resources - human capital and natural renewable resources - are smartly utilized.
The public-private partnership between the city and citizens or local initiatives would create a platform where both parties would decide and be responsible in creating, protecting and maintaining urban open spaces (for instance proposing new permeable spaces or planting new and protecting existing trees or repairing existing public fountains and installing new drinking water taps in urban ‘hot-spots’).

In both cases, Old Town and Petržalka, the notion of rediscovering and creating a relationship with the city is strong. The Old Town has the potential to become more resourceful with its climatological processes such as storm water and to create a cooler and more attractive urban environment to its citizens. It can also become more cost-effective by putting less load on the drainage system and mobilizing and letting people maintain and re-establish a relationship with their parks. Petržalka is a home to one third of Bratislava’s population, offering an anonymous city-scape to anonymous city-dwellers. Through re-creating, rediscovering and reconnecting with the social and natural components of the city, the living conditions of us city-dwellers will improve. All ideas of citizens, not interfering with the permeable character and ecological processes of the area, are welcome and allowed. A tree nursery becoming an urban forest, food growing or a sport area for children and adults.

In the beginning of this paper, both of case study locations were presented with their strengths and weaknesses. With simple and smart environmental and social injections, both can... This, however, is not in the hands of “someone” or a centrally responsible institution, but in the hands of all of us who want to live in a healthy and attractive urban environment.

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Abstract
Nowadays, in post-communist countries, we face not only consequences of previous mistakes but also problems caused by capitalism. Urban land is at a premium, therefore in a developed high pressure produced by local entrepreneurs and bigger companies like retail chains. An important factor delimiting public open spaces is the ownership which decides if the space will be used by the public (public property) or by a certain group of users (private property) (Stiles, 2013). We could claim that all problems mentioned above are current topics of many municipalities in post-communist countries. In the paper, we will discuss this issue on an ongoing topic of contemporary landscape architecture and public space design, see fig. 2. The results were presented to the head of The Urban Planning and Architecture Department at the municipality of Nové Zámky.

Nowadays, the town management is up to sale the mentioned area to a development company that has announced its aim to build there a Baumax store. Although, the town management does not offer the public open space to the public. The municipality keeps silent; it does not even answer an open letter or react on the public agitation.

Keywords | key phrases
city park; development pressure; open space; public park; urban environment

PUBLIC SPACES IN THE URBAN ENVIRONMENT
From everlasting have public spaces in our society very important functions which in our modern age are often overlooked. We know from historical sources that old ancient civilizations had the demands to gather so they could discuss, change opinions or to do trade. Antique thinkers proclaimed their theories exactly at big open places where crowds could hear them. Open spaces had in every developmental stage of architectural styles their own stable point. Nowadays we consider public places, especially open public spaces, to be some image that shows relationship of society to the nature.

We think it is necessary to define what exactly the terms open space and public place mean. There are more definitions that describe the meaning of these collocations. It may seem simple to define urban public spaces but the very definition is influenced by a number of factors and also by the point of view we look at this area. We can take into consideration only physical influence of urban objects which define non-built up areas. From the other point of view we can take into consideration immaterial factors and predominant activities. As cities were growing and built, streets, promenades, squares and parks were created.

Danish architect and urbanist Gehl states in his publications also definitions by the users of public spaces who describe them like areas that make possible to do necessary, obligatory and social activities (Gehl, 1987). Necessary activities often take over the role of obligatory activities such as way to the school or work, shopping, waiting for public transport, etc. Optional activities take place in case of free time and willingness, it could be walking, sitting in the park, sunbathing, chatting with strangers and others.

Urban structures and functions of vegetation in urban settlement, conceptual planning principles, standards and regulations and modern trends of public space design are elaborated by Supuka, Feriancová and others (2008). An important factor delimiting public open spaces is the ownership which decides if the space will be used by the public (public property) or by a certain group of users (private property) (Stiles, 2013). The urban public spaces have a significant impact on cities and on their quality of life. The number of residents living in cities increases and population density on square kilometre becomes higher. So it is necessary to grab the chance to reuse every forgotten non-built up area and change it to liveable piece of green public space.

PUBLIC SPACES IN SLOVAK TOWNS AND CITIES
Public open spaces like squares, boulevards, pedestrian zones, parks and green spaces are very important for a convivial living in the urban environment. They make urban areas liveable and offer a proper space to gather, meet, talk, play and enjoy the nature. Without public open spaces, cities and villages would be just built-up areas with no possibilities for social interaction.

History and current state
It is still problematic in post-communist countries to implement progressive contemporary trends in public space design. During the past regime, towns in Slovakia and other communist countries underwent a massive housing and industrial development. The urban development was mainly dominated by prefab housing estates while only a little attention was paid to neighbourhood parks and green spaces. Living space in the past was not designed for use by the residents: they were able to buy flats due to subsidies but the overall environmental impact of these massive concrete agglomerations was not really concerned.

There is a specific phenomenon of communist regime called “era of normalization”. It means that every urbanistic development was under control and every architect and town planner had to use just allowed technical standards, materials and designs. This approach caused very striking resemblance of districts built in that area. So we can say that there was the same site furniture and same children playground equipments. Public green spaces and parks were full of vegetation of poor quality and without conceptual thinking.

Nowadays, in post-communist countries, we face not only consequences of previous mistakes but also problems caused by capitalism. The financial flow has changed and municipalities have to manage their incomes and expenses on their own. For self-governments, it is crucial to be aware
of their goals and priorities. Public open spaces stagnate and only a few places were redesigned and renewed. Current densification of former urbanistic structures and functional utilization of green spaces, e.g. static transport needs, cause the quality change of the former architectural concept (Kristiánová – Štepanková, 2012). We could claim that open public spaces, especially green spaces, are now very often exposed to development pressure and local governments with no excuses sold this areas with explanations to financial debts.

CASE STUDY NOVÉ ZÁMKY

We decided to write in this paper about case study Nové Zámky where we nowadays face the problem of selling the public property out. The city of Nové Zámky is located in south-west of Slovakia in the centre of the Danube Lowland. It has approximately 39,000 dwellers. The city is surrounded by the agrarian region with dominance mainly of non-forested woody vegetation such as field baulls, shelter belts and accompanying vegetation of roads and rivers. So there is not much places around where people can relax in the nature.

Public greenery of the city is also quite poor. There are several small parks and street parks but most of public greenery is made up from green spaces at housing estates which do not achieve appropriate quality. So people barely have opportunity to visit and enjoy modern convivial open space.

Green space in the S. H. Vajanský street

In the southern part of the city is situated green space at about 15,000 square meters of area. At this place stood in the past houses but in the late 50’s were demolished. This area is for more than 50 years just empty space between buildings, covered with grass and where some trees are growing. People from surrounding use this space mostly for walking the dogs.

During the development of the city in the 70’s, this zone was used as service area but since that time it has no specific utilization. This plot of land is for decades specified in the local plan documentation as the area for public facilities and housing. But this area has a big potential to become a great modern public park for this part of the city with mostly built-up areas.

Fig. 1 Aerial view to the designed area located between two different types of housing density (family houses and prefab housing estates). This area is according to analyses suitable for a new neighbourhood park. The investment into this space would enrich the green infrastructure and a smart and sustainable growth, in accordance with the Europe 2020 (European Commission, 2013). Improved would be ecological aspects (clean air; reduced dustiness, noise and heat island effect; sustainable storm water management; improved microclimate, biodiversity etc.), as well as social aspects (improved public life and social interaction, improved visual and perceptual attributes of the urban environment).

Development pressure

As we mentioned above, today’s local governments face a crucial situation related to financial management. Almost every city in our country confronts financial difficulties and it is in debts. Therefore many local governments try to reach incomes regardless of tax incomes. This may seem to be correct in economic realm but just in case that local governments have responsibly. We still face in post-communist countries some need to have freedom of choice in case of offered services. This occurs mostly in consumerist society. The problem comes if we take into consideration one important aspect. Most of local governments act independently. Some stores want to be as close to the customer as possible so they grab the opportunity if some local government sells public land. So many empty areas in urbanized environment could be transformed into valuable open public space.

Public initiative on Facebook

Concerning this matter the local government of Nové Zámky had announced public tender for sale of mentioned area. Afterwards in April were announced the winners. There was only one taker that agreed all conditions of the tender. This phenomenon has very serious and long-term consequences for control of public property.

Although, the municipality acts in accordance with the law but it neglects the public will and its responsibility to the residents (voters). We have founded a group on Facebook (Pavelka and Tóth, 2013) against this massive construction pressure and to fight against conversions of the green public space and dilution of inhabitants. The municipality keeps silent; it did not even answer an open letter or react on the public agitation.

What does and what should the local government do

This is not the first case that happened in Nové Zámky. There are a few other similar cases in which the local government sold civic property and the general public of citizens found out when it was too late. It was the same time, who knows why?

When cases like this one occur we can see the deficiencies of both sides, the local government and the public. The biggest problem of our case are the lack of communication and transparency. The local government did just the legal acts which the law orders. We think it is not enough.

Lessons learnt and future tasks

We feel a strong deficiency of communication from both the local government and the public. Somehow it shows no interest of local government in the desires of the citizens. If the citizens do not see the fair play towards them, it causes misunderstanding and lack of interest. It is necessary to understand the citizens and to offer the right ways to express their disagreement and to interpose the objections. In the near future we plan to establish the...
local citizens’ association which may be involved as one party to a case. Afterwards we would like to contribute to improving the knowledge of citizens about their environment, to involve the city dwellers into public affairs and to organize voluntary jobs for common well-being.

Acknowledgement

This contribution has been elaborated within the grant projects VEGA No. 1/0769/12 and KEGA No. 019SPU-4/2011 of the Ministry of Education, Science, Research and Sport of the Slovak Republic.

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Regeneration
Urban Transformation Pittsburgh

Henry Hanson

SOUTH SIDE REGENERATION

Introduction

As we consider the forces behind transformation of the landscape, I would like to introduce the topic of regeneration with the story of a neighborhood and the City that it is a part of. The South Side neighborhood is the closest in-dustrial neighborhood to downtown Pittsburgh. With veins of coal buried in the surrounding hills, Steel was the growth engine of the City and on the inside of the bend there is a flat area of land. Corporate interests tightly controlled the development of industry; in the neighbor-hood, city and region. Productivity was measured in profi ts. Pittsburghers worked long hours and in many cases to move to, not just for work, but for a good life. The ensuing decades have seen countless alliances between private, public, community and foundation communities bringing re-ality to the vision. Pittsburgh is often recognized as one of America’s best places to live.

Background

As evidenced in the description of Pittsburgh in his Atlantic Monthly article by James Parton in 1868, Pittsburgh was not a pleasant place to live. It was a place of labor. The sun choking shroud of smoke and soot from the mills persisted in the City for another 80 years, expanding as the City and its industries grew. Then an unusual alliance began soon after the Second World War that laid the groundwork for future generations to work toward a healthier, and brighter future for the region. Two leaders, a banker and a Mayor, from opposite ends of the political spectrum envisioned a future where the Pittsburgh region would be a good place to grow and a place where people would want to stay and a place where Pittsburgh was a place people wanted to move to, not just for work, but for a good life. The ensuing decades have seen countless alliances between private, public, community and foundation communities bringing re-ality to the vision. Pittsburgh is often recognized as one of America’s best places to live.

Pittsburgh is located at the confluence of two rivers, the Allegheny from the north and the Monongahela from the south. From this confluence begins the Ohio River that continues on to the Mississippi River. Use of this area began as a trading place between Native Americans and European immigrants. Soon there was need for fortiﬁcation due to conﬂicts with natives and between Europeans. Two successive fortiﬁcations were constructed at the point of confluence of the rivers. Fort Duquesne, constructed by the French in 1754, and Fort Pitt constructed by the Brit- ish in 1759. The ensuing settlement around Fort Pitt was known as Pittsburgh. As conﬂicts abated the rivers and the Pennsylvania canal became primary transport corridors connecting this western gateway to manufacturing and processing, anything that required heat energy. In the eyes of many, particularly outside industrial areas, smoke was considered simply a part of the industrial city that people must accept. Simultaneously and silently, many other forms of insidious pollution were occurring in the soil, water and air. These conditions deepened and expanded over into the 20th century, through the Second World War when Pittsburgh became a notable part of the war machine. Fueled by industries hunger for labor, the population of Pittsburgh grew from a meager 46,601 at the beginning of towns are remarkably similar, a marriage of the industrial needs and the landscape foundation upon which the indus-try and associated communities were built. The primary elements of this relationship begin with the river bend, where on the outside of the bend is a steep slope, and on the inside of the bend is a flat area of land. The sedimentation in the valley floor, a perfect setting to con-struct a steel mill. The meanders of the river in the valley create alternating opportunities for mill sites. Therefore, rail lines were constructed on both sides to connect mills with the supply chain. The steel mill was generally arranged in a linear fashion, from raw materials to ﬁnished product; with the river on one side and the town on the other. The linear arrangement of the mill was echoed with a linear arrange-ment of Main Street, the towns business district. Typically, this main street was nearly adjacent to the mill, removed by one or two blocks so that both sides of the street could be occupied by businesses. As the width of the valley was lim-ited, the residential areas of the mill town typically climbed the hills, originating from the grid pattern established in the main street relationship with the mill. The street grid rising from the river valley remains inflexible, until it either folds or breaks. Infrastructure, streets, sewer and water are the framework of this grid system. Patterns of grids are consist-ent from one mill town to another. As industry grew, concentrated in the valley and along the river, environmental degradation followed in due course. Smoke was the primary concern. The source of smoke was primarily the burning of high volatile bituminous coal which was abundant, buried beneath Pittsburgh and the surrounding hills. In addition to industrial use in manufac-turing, it was also used for heating of homes and office buildings. It was also used for steel manufacturing and processing, anything that required heat energy. In the eyes of many, particularly outside industrial areas, smoke was considered simply a part of the industrial city that people must accept. Simultaneously and silently, many other forms of insidious pollution were occurring in the soil, water and air. These conditions deepened and expanded over into the 20th century, through the Second World War when Pittsburgh became a notable part of the war machine. Fueled by industries hunger for labor, the population of Pittsburgh grew from a meager 46,601 at the beginning of
heavy industry to 321,616 in 1990. However, given the political boundaries of the City, this is only a partial reflection of population change as many of the mills and associated mill towns were outside of the Pittsburgh political boundary.

Pittsburgh relied on the steel industry as the anchor of its economy, reliant on both the availability of raw materials and the demand of markets. Labor was frequently restless and it was common for workers to change locations. At the end of the Second World War Pittsburgh retained its reputation as a "place to work, not to live".

Due in part to the financing demands of corporations, banking became the significant service industry in Pittsburgh. As Andrew Carnegie had been the main power in the steel industry, he continued to reside in Pittsburgh and cared about the future. These two men forged a relationship that laid the groundwork for a transformation of the City from a place to work to a place to live. Their common ground was expressed through the formation of the Allegheny Conference on Community Development (ACCD), a nonprofit organization. Through this intermediary the political will of the Mayor and the resources of the corporate vision was able to plan major civic, economic and quality of life changes to the City. This down visioning was able to effectively exclude the corporate nemesis, organized labor, from the decision making process.

The 1980’s saw rapid decline and death of the steel industry as the economic foundation to the region, leaving an industrial wasteland, exhausted ecosystems and widespread unemployment. The City quickly realized that a stable and sustainable economy must be diversified. However, how to grow and attract new businesses became the focal concern. How to make Pittsburgh a place people wanted to live? The entire region was devastated, but the mill towns were particularly hard hit. With mills closing, the economic system of the region was disrupted. Business districts and city centers fell into disrepair. The more mobile, particularly the young, fled, trapping the less mobile in conditions of economic, social and environmental decay. With dramatic population loss and the loss of tax revenue, the municipalities struggled to provide even the most basic services. Population loss although concentrated in the Monongahela Valley was widespread, affecting the entire region increasing the infrastructure burden on a per capita basis. Schools, police, fire protection and code enforcement all hobbled along or collapsed under the burden of losing tax revenues from the single industry foundation of the economy.

Left behind in the wake of the collapse of steel were numerous mill sites, devastated towns and various industrial infrastructure, particularly rail lines. The hills of Pittsburgh had been virtually exhausted of their coal and were now bleeding acidic water. Hazardous construction materials and industrial discharge contaminated virtually all of the wasteland. Regulatory requirements for clean up made rehabilitation of these sites far more expensive than construction. Over this interval of time the Allegheny Conference took advantage of several federal and state programs to provide a way to escape the ruins of the old industrial towns. All of these factors radically altered the pattern of development in the region. With the governmental fragmentation, policies were created to address the desolate city and the old battleground, competing for the few businesses that were interested in remaining in the region. Economic recovery and population stability and quality of life were all at risk.

However, the agents of change were in place. The old money of some of Pittsburgh’s most wealthy families continued to reside in Pittsburgh and cared about the future. They were also concerned about the future of their businesses. These foundations in cooperation with a cadre of community-based organizations, non-profit organizations, governmental agencies and governmental (largely State and Federal) funding, strategically coordinated support for a wide variety of projects. One of the keystones of this effort was the redevelopment of contaminated mill sites and the riverfront. To turn to the rivers as a resource for life, people and the native environment.

The original development of the mills and mill towns abided by some basic environmental constraints. Steep hillsides along the river remained largely undeveloped. The river-side was some of the most valuable real estate. Rail infrastructure, much of it underused or obsolete, lined the river, connecting the mills. This configuration offered numerous signifi cant advantages in devising strategies for reinvigorating the urban region.

- The mill sites are large and long, enabling phased development of a large complex.
- The mill sites are well served by infrastructure.
- Redevelopment of the mill site is reinventing the town.
- The environmental devastation along the riverfront can be addressed at the same time as development of the site.
- Sites are separated and have their own specifi c characteristics, therefore, redevelopment can respond to the specific conditions of location, not simply copy what is done elsewhere.

The riverfront between sites is strung with rail corridor, many of which had long been obsolete. These corridors provide excellent opportunities for recreation as well as restorat-

The South Side neighborhood was devastated by the failure of the industrial economy in the region. More than 20% of the working population was unemployed. Approximately 40% of the main street along the riverfront were closed. Searching for a new future, the community established the South Side Local Development Corpora-

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ate in the same location with the same business formula, serving the community and bringing in sports youth from the nearby universities.

The second high priority was housing. A primary goal for the community was to continue to maintain affordability for existing residents. Although economic conditions had devastated the community, there were concerns that the community might succumb to gentrification and displace the multigenerational families that are an essential part of the soul of this place. Existing row-house properties are generally modest in size with largely wood frame construction; they were vulnerable to deferred maintenance and deterioration. There were two cornerstones to the housing revitalization strategy; first, to grow employment. Although employment is a regional issue, the SSLDC established relationships with the surrounding stable institutions (universities and health care). It became necessary to attract new residents that were willing to invest in the future of the neighborhood with purchase of a home. The best way for the SSLDC to combat this was to increase value without displacing residents; therefore, the SSLDC initiated a subsidized housing development program with the support of numerous foundations and government agencies including the Urban Redevelopment Authority. The first project of 10 row houses was located on a small infill site, deep in the neighborhood. The new homes were of similar scale to the context and sold quite rapidly, given the deep subsidy support. The second project is located on a larger site where it was hoped that the subsidy support (less that the prior project) would be sufficient to spur private investment. With a significantly larger scale, this project included both large housing and adaptive reuse. This project also endeavored to project a more optimistic view of the future with moderately more contemporary features and style. Jumping forward in 2004, the South Side community created its own revitalization strategy with the current need to subsidize housing in the South Side. The real estate market is both stable and well valued. There has not been a displacement of existing residents under pressure of gentrification. Numerous private developers seek opportunities to regenerate existing homes or construct new homes on existing lots.

It should be noted that the SSLDC, representing the community, also endeavored throughout its existence to keep the community both informed and engaged in all of their initiatives. An example of this success is in that all development projects in the South Side were actively encouraged to first engage in discussions with the SSLDC and the community prior to submitting any documents for review and approval. Probably the best illustration is the following case study.

With the commercial development and housing projects on solid ground, the future of the closed steel mill came into focus. With no realistic opportunities of heavy industrial revival of the site and little interest in it from a regional perspective, the site begged the question, what next?

South Side Works; Pittsburgh PA

Located at the eastern end of the main street in the South Side

Currently know as South Side Works, the site is located approximately 1.5 miles (2.4 km) to Oakland, 2.7 miles (4.4 km) to downtown. The 123 acre (50.4 ha) site was home to a mill of the J&L Steel Company, later acquired by LTV Steel in 1974. At it’s peak in 1960 approximately 8,500 people were employed at this site. In 1993 the Urban Redevelopment Authority of Pittsburgh (URA) purchased the property and LTV operations continued until 1998 when they ceased operations and demolished the mill. Construction of the current South Side Works commenced soon thereafter with completion of the core facilities in 2004. Some sites remain undeveloped, however the majority of the area is fully functional.

With URA ownership, there was considerable public leverage in determining how the site would be developed and who would play what role. The South Side community is particularly well organized with numerous community-based organizations following a range of missions and serving a variety of constituencies. These various groups are bound together with an umbrella organization, the South Side Planning Forum, a consensus-based decision-making organization, that reviews developments in consideration of the Neighborhood Plan. Generally, the URA and the City places high regard for the outcome of the Planning Forum and its constituent organizations. The Planning Forum played a critical role in establishing design principles and reviewing development proposals throughout the process. This relationship between the City and the community organizations is common within the City and is based on a long development process. Many of these organizations, including those in the South Side, receive some of their support from a variety of sources in the foundation community, which is largely comprised of private nonprofit organizations founded by philanthropists of Pittsburgh origin such as: Heinz Endowments, R. K. Mellon, and the Pittsburgh Foundation. As a result of this foundation strength, Pittsburgh has the highest per capita foundation assets of any City of its kind, $2,214.91 per person with an average of $891.07. The resulting South Side Works development is based on the broad based goals and objectives brought forward by the varied constituencies, including developers. The development continues the street pattern from the surrounding areas—providing pedestrian and vehicular continuity between the surrounding community and the new development. The primary division between the existing community and the new development is East Carson Street, a major urban corridor, but also the main commercial vein through the community. The role of East Carson Street was preserved through the new development with a variety of mixed-use buildings, friendly to the 19th and early 20th century street. First floor storefronts have offices and apartments above. Businesses on the main street are largely local service type businesses. On the interior of the development the building profile changes to more upscale and larger footprint.
businesses. However, most of them have upper floor residential or office spaces, parking is provided on street, in the same pattern as the surrounding community. Given the density of the development and the parking demand, parking structures are meshed in with the native block pattern. Building heights are maintained to maintain the scale of the urban spaces, similar to East Carson Street. Visual and physical access to the river, a high community priority, is generally maintained. The variety of business in the proposed development also provides a range of operating hours, similar to the surrounding business mix on East Carson Street. The result is a place that is occupied 24 hours a day. The area has become a common place for people to walk in the evening, even when stores are closed.

The Monongahela Riverfront is a focal feature of offices, restaurants and entertainment facilities. The entire community uses a trail that is part of the same trail system in the Waterfront, as access is very easy from numerous points throughout its length.

The western portion of the site is all residential, except the first floor of the East Carson Street side. This area was developed by Continental Development, the same developer as The Waterfront; however, it abides by the planning goals and objectives of a broader constituency. It is also worth noting that the rental cost per square foot is approximately 25% higher than The Waterfront: $1.20/sf/month ($12.68/sm/month) versus $1.50/sf/month ($15.84/sm/month) at The Waterfront.

Overall, this project is successful in a variety of ways and generally responds well to the goals and objectives of all constituents. South Side Works is generally recognized as a part of the South Side neighborhood, by residents and visitors alike.

In October, 2010 the Board of the SSLDC voted to terminate their activities through an 18 month transition period because “Mission Accomplished”.

A few lessons learned from the experience;
- Regeneration is a process, it is not the consequence of any single person, organization or initiative.
- Vision driven leadership was a critical ingredient in initiating the process. Shared political and corporate leadership

(1.) James Parton, Pittsburg, Atlantic Monthly, January 1868
(2.) Nicholas Stevensson Kars, The immigrant Experience
(3.) Census statistics from http://digital.library.pitt.edu:
Sustainable Retail Mall Redevelopment

Spyrka Wojciech, Wójcik Jerzy

Abstract
This article is a gap analysis of existing `Zakopianka` retail mall in Kraków, Poland, investigating historic development process, current conditions and future opportunities for smart growth.

Rapid expansion of commercial zones in low density areas, oriented on the use of individual means of transport, is a typical illustration of development patterns occurring in Poland after year 1989. Taking advantage of the newly gained economic perspectives has transformed the urban and suburban landscape, resulting in degradation of natural environment and city landscape. Scattered, automobile-oriented developments with extensive parking footprints, convenient for retail customers, were widely adopted as a dominant model for retail complexes in Poland. As a result of this process, exclusion occurs on multiple levels, impairing opportunities for sustainable growth.

LEED for Neighborhood Development based on TOD concept attempts to set guidelines for sustainable commercial zone redevelopment projects. In the light of LEED and TOD new investments and existing redevelopments of buildings and transit should rely on Robert's Cervero '5d rule' that includes: design, diversity, density, destination accessibility, and distance to transit.

The following principles can be adopted as a part of a repeatable strategy for commercial zones redevelopment.

Keywords | Key phrases
Retail Mall Redevelopment, Transit Oriented Development, LEED for Neighborhood Development, Sustainable Development, Smart Growth.

INTRODUCTION
In the city of Krakow main urban development plan, that is currently in the process of public consultations, `Zakopianka` retail mall was identified as one of the four major communication nodes, in an aim to integrate existing rail network with municipal transport system. These nodes are marked as areas intended to activate development around transits stops. Although Krakow is continuously aspiring to strengthen its position as a metropolitan city, for many years it has struggled with the need for road network extension, aging and decline of rail infrastructure and progressive urbanization of semi-rural and rural areas surrounding the city. Due to constant transformation of rural areas into low-density suburbia, without providing sufficient quality and quantity infrastructure and utilizing public transport, the city is failing to offer its inhabitants attractive housing environment. The quality of air in Krakow is declining, which is confirmed by regular excess of allowable concentrations of harmful substances, such as: sulfur dioxide, nitric oxide, suspended dusts (PM10 and PM2,5 category) to a level reminiscent of the late 1980's where obsolete factories were still in operation.

The above mentioned legislation aims to change the existing situation, but this process is not supported by holistic redevelopment strategies, that could be applied on a site scale. The aim of this paper is to formulate a repeatable strategy, that would bridge the gap between legislation and practice, helping `Zakopianka` to become one of the new local centers of activity.

`ZAKOPIANKA` - HISTORIC DEVELOPMENT PROCESS, CURRENT CONDITIONS AND FUTURE OPPORTUNITIES FOR SMART GROWTH.

The history of the area on which `Zakopianka` is located dates back to year 1906, when `Solvay` sodium carbonate factory was established in Podgórze, which was then a separate city, later incorporated into the municipality of Krakow. The above took place within the period of history, when Krakow was still a part of Austro-Hungarian Empire.
The location of the factory was aimed to maximize the use of available resources and therefore placed halfway between the places of extraction of two major ingredients used in the production process: salt mine in Wieliczka and limestone quarry in Zakopane and adjacent to the main railway connecting Krakow and Vienna. In the 1970’s different production technology was employed causing substantially bad pollution and contributing to degrading air quality in the entire city of Krakow. The factory was closed in 1989 and it took 7 years to demolish its remnants and re-cultivate the area, by developing a complex retail malls named ‘Zakopianka’, taking advantage of the proximity to Krakow’s historic city center and adjacent beginning of S7 expressway of the same name. The development pattern of ‘Zakopianka’ retail mall can be shown by four distinctive stages on Fig.6, described below (Positive impacts are marked in magenta and negative impacts are marked in blue).

Stage 1 – Closing of ‘Solvay’ followed by demolition of post-industrial buildings. Stage 2 – ‘Zakopianka’ retail mall opening. Introduction of new functions and new spatial arrangement. Stage 3 – Negative development impacts; increased automobile dependence; lack of public spaces, social exclusions Stage 4 – Introduction of new urban planning legislation, increased role of sustainable development.

Development of commercial functions in suburban areas and outskirts of major Polish cities is strongly connected to greater affordability of cars causing increased automobile dependence. The ‘Zakopianka’ retail mall with extensive land areas transformed into hardscape and dedicated to parking was adopted in Poland without prior discussion and analysis and therefore all major downfalls of this model were repeated.

Despite the fact, that ‘Zakopianka’ is located in vicinity of public transport lines, car usage was privileged by reorganizing the existing road network, leading to increasing car usage and creating a 200 m strip of car-friendly hardscape greatly restricting pedestrian accessibility. Creating a 200 m strip of car-friendly hardscape greatly restricting pedestrian accessibility. Creating a 200 m strip of car-friendly hardscape greatly restricting pedestrian accessibility.

In the redevelopment process three historic buildings were preserved and adopted to serve as retail spaces, but due to the fact that the buildings are submerged up to 1,5 meters below the ground floor level of the mall are less attractive, despite having open and accessible facades. The redeveloped area has quickly gained on popularity and was widely perceived as attractive not only by Krakow’s citizens, but also by the citizens of adjacent satellite cities, served by the S7 route.

However, after applying a critical analysis to the current spatial arrangement, harmful social implications can also be seen. Exclusion of mall customers without access to cars as well as the lack of public transport accessibility and functions, that are essential to one’s everyday life. The transport stop is a focal point of areas designed in accordance with TOD principles, serving as backbone of further development. The term was originally created by Peter Calthorpe in early 1990’s, during his work on TOD for the city of Portland, Oregon, that was also the first example of putting TOD principles into practice. TOD is not a new urban design concept - successful attempts of TOD implementation have taken place in Stockholm and Hamburg in the 60’s and a decade later in both Americas. Leadership in Energy and Environmental Design (LEED) is a building rating system developed by US Green Building Council (USGBC) in 2000. USGBC refers to LEED as ‘a program that provides third-party verification of green buildings,’ that enables comprehensive implementation of sustainable design and operation practices throughout the buildings life cycle. LEED for Neighborhood Development was created in cooperation with the New Urbanism movement, referring to concepts similar to TOD, such as dominant role of pedestrian traffic, functional diversity and clear and convenient spatial structure.
these principles is a return to proven urban patterns, additionally enhanced by sustainable design strategies, assessing the influence of these traditional patterns and principles on the environment, throughout their lifecycle.

The interdependence described above can be observed in LEED for Neighborhood Development (ND), through efficient use of land, promoting pedestrian-oriented buildings and use of alternative means of transport. Legible and attractive pedestrian and cycle paths, leading to clearly established destinations are vital parts of this design philosophy. At the same time, cars are not entirely excluded from public spaces, but are deprived of their dominant role, through relegating parking places to less exposed locations. Another important aspect of LEED ND is functional diversity, achieved through including housing in commercial developments to ensure, that public spaces are lively and attractive also outside business and operating hours of office and retail functions. In this way, opportunities for building social relations are created on the grounds of livable public spaces such as: activity nodes, promenades, shopping streets, as opposed to interior strips of retail malls.

LEED ND AND TOD – KEY PRINCIPLES

The 5D rule is pivotal to the idea of TOD, and constitutes of the following:

1. Design – Clear urban structure building identity and traditional public spaces.
2. Diversity – Majority of basic public functions located within 5 to 10 minute walking distance. Diversity is reached through function and diverse housing typology.
3. Density – Increases as distance to public transport node decreases. Workplaces, services and retail are located in the nearest proximity to the node. As distance from the node increases, these are replaced by housing and subsequently by open green areas.
4. Destination accessibility – Trip destination should be reached in a simplest and fastest possible way, preferably by variable means of transport.
5. Distance to transit – Pedestrian, cycle and car access to the node should be clear and legible.

The following three major categories contribute to LEED ND:

1. Smart location & linkage - promote walkable neighborhoods with efficient transportation options and open space.
2. Neighborhood pattern & design - emphasize compact, walkable, vibrant, mixed-use neighborhoods with good connections to nearby communities.
3. Green infrastructure & buildings - reduce the environmental consequences of construction and operation of buildings and infrastructure.

LEED ND and TOD principles can be used as a set of design strategies and principles, applicable to various scales and functions.

UNIVERSAL LANDSCAPE TRANSFORMATION STRATEGY FOR ‘ZAKOPIANKA’ RETAIL MALL

In the above paragraphs, we have described the four phases of ‘Zakopianka’ retail mall development and outlined key principles of LEED and TOD, that could be applied to this location.

Prior to investigating possible interventions in the mall, it needs to be pointed out that there are basic site and building features that can be regarded as positive and contribute to the site’s redevelopment potential. As the mall was developed on an infill site already served by existing infrastructure, the contamination of site was remediated prior to construction, the initial environmental impact was greatly reduced. It is also worth noticing, that the malls area is surrounded by an existing road network, with bus, tram and rail station serving the site vicinity as well as a meadow complex with great biodiversity, located on postindustrial land masses, that were created as a side-effect of industrial activities.

On the basis of LEED ND and TOD principles five major areas of intervention were identified, listed in Tab.1. Possible landscape transformation strategies were attached to each of this areas:

<table>
<thead>
<tr>
<th>Areas of Intervention</th>
<th>Landscape Transformation Strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multi-functionality</td>
<td>Open parking replacement with infill buildings; Diverse functions</td>
</tr>
<tr>
<td>Public spaces</td>
<td>Continuous street network; human scale; legibility</td>
</tr>
<tr>
<td>Accessibility</td>
<td>Ground level entrances; street facing retail</td>
</tr>
<tr>
<td>Biodiversity</td>
<td>Continuous greeneries; stormwater management; native species</td>
</tr>
<tr>
<td>Alternative transport</td>
<td>Bicycle, pedestrian paths; transit mode variety; park and ride infrastructure</td>
</tr>
</tbody>
</table>

At the same time it creates a more vibrant and lively neighborhood, attracting more people, which is also one of the key factors taken into account by retailers, when choosing a location. In addition, pedestrian orientation should be dominant, to reduce the need for short-distance automobile trips.

Accessibility can also be increased in a broader context, by providing mixed income housing, in order do avoid social exclusions and gentrification.

The above mentioned strategies should be supplemented by increased biodiversity on site. In a sustainable development pattern accessible public spaces should be accompanied by a network of new and existing greenery, ensuring proper mental and physical health of inhabitants. While designing the greenery, native species should be used to preserve the local natural habitat. In these green spaces, sustainable water management plays a key role, since retaining, treating and using rain water on-site reduces the burden on existing city infrastructure and creates an opportunity to design pleasant public spaces.

In order to provide proper connectivity with adjacent areas, transport strategies creating an alternative to automobile dependence should be used. On a site level pedestrian and bicycle access are the priority and car usage should be accompanied by infrastructure such as bicycle parking, proper lighting and safe pedestrian and cycle paths. On a regional level public transport system should provide convenient site access, and support rail transport in case of long distance trips. On a regional level, parking for commuters should be located on site, shared with mall customers to avoid parking infrastructure oversizing.

CONCLUSIONS

Implementing the proposed landscape transformation strategy in ‘Zakopianka’ retail mall would be an attempt to resolve the social, economic and environmental challenges that have occurred during the past 17 years. The existing gap between legislation and practice can be bridged by the efforts of all stakeholders engaged in the redevelopment.
process, including city council, developers, investors, retail tenants and local communities. LEED for Neighborhood Development and Transport Oriented Development guidelines can aid sustainable commercial zone redevelopment processes and create a field for stakeholder discussion.

References
Role of Railway in a Transformation of Cities: Case Study of Smíchov, Prague

Kateřina Čechová

Abstract

Aim of this paper is to explore the railway as a transformative force in the city. The topic will be factually introduced on the example of Smíchov, one of the oldest industrial districts of Prague, located in the vicinity of the historical core. Method used in this paper is research on the district’s development in the past and present with special focus on the dynamic interrelations between railway and the district’s urban development, for simplification demonstrated on two distinct areas of Smíchov: Smíchov railway station and the traditional focal point of Smíchov – the area of Anděl cross-road with former Ringhoffer factory, respectively. There are three distinct periods in the history of Smíchov, distinguishable by the role railway played in the development of the district, which are subject of single chapters of the paper.

Keywords | Key phrases
railway, railway station, industry, redevelopment

THE EARLY DAYS OF INDUSTRIAL REVOLUTION. THE CASE OF SMÍCHOV

The way railway entered the city was revolutionary, extremely different from any previous transportation mode, and the changes it triggered reached far beyond simple utilities. With railway, new ideas in the world of traditional authorities, cross border experience and the knowledge of technical and social revolution spread in yet unseen speed (Hons, 1961). Along with that, the physical structure of the cities transformed significantly. The railway as a supplier of coal for steam engines worked as a concentric force, causing accumulation of industries and people, and thus creating the well known scheme of European metropolises with a main core in the vicinity of the railway station (Musil 2002).

What shape did this process take in Smíchov, one of the emblematic industrial districts of Prague?

Before the big boom

Smíchov of the pre-industrial revolution times was a pristine land of scattered farmhouses and church courts behind the Prague gates (Fig.1). In 17th century the aristocracy was setting their summer residences there. In their ruins, the first textile manufactures and factories started to be built in the middle of the 18th century (Broncová, 1996).

The key moment for the Smíchov industry arrives in 1843, when the Ringhoffer factory, specialized in industrial cauldrons and railway carriages, concentrates all its facilities to new sites in Smíchov, north-west of today’s crossroad of Anděl. Ringhoffer factory was soon to become the largest mechanical engineering company of the Austrian-Hungarian empire (Janková, 2009) (Broncová, 1996). The poor infrastructure of Smíchov in the middle of the 19th century could be illustrated by the memories of journalist Ignat Hermann, describing the “half-day long performance” when the Ringhoffer factory transported their railway carriages on the horse-wagons through the narrow streets of Prague, across the Charles bridge to the Prague-centre station (today Masarykovo nádraží) (Hruža, 1989).

Emergence of the railway

Since 1845, the railway station of Prague – Prague-centre (Praha-střed) was located right within the fortification of Nové město. The railway was connecting Prague with Vienna and Dresden, and new ways of connecting Prague also with Pilzen were searched for. The attempts to bring this line to the Prague-centre station proved unfeasible, and new location for “western railway” station was found in Smíchov. The longish narrow site along the Vltava river, in the south of the existing industrial settlement, predetermined the arrangement of the site and the future development of the district. First trains from the yet unfinished Station of Western Railway departed 1862. The two buildings of departure and arrival were soon completed with two another stations of private railway companies – Duchcovská and Buštěhradská, which were primarily focused on import of coal and limestone for the Smíchov’s industry (Broncová, 1996).

In 1870s, Smíchov constructed array of new infrastructural improvements: bridge connections with Prague for horse wagons as well as railway, or a new horse way. The industry was growing with regular supply of coal and other raw materials, large coal court was operating on the area of Buštěhradská and Duchcovská railway station. Between
1880 and 1888, the Ringhoffer plant was tightly connected with the railway through network of railway sidings, enabling then more direct supply of raw materials on one side, and direct delivery of carriages to the railway. In the 1890s, the production site was extended several times in order to respond to new demands in the production (Janková, 2009).

District development

The blossoming time for Smíchov came in 1880s, when the residential houses started to reach up to six floors, newly constructed waterfronts enabled building sites along the river, new military quarters was built and a number of public buildings was constructed. (Broncová, 1996). The transformation of Smíchov was by no means strictly focused on industrial development, contrary, it was complex, manifold and reaching to all spheres of district’s life. Nevertheless, it was the coexistence of railway and industry in Smíchov, synergetic and mutually beneficial, which was speeding up the development of the whole quarter, intensifying the processes of concentration and cumulation (Fig.2).

SMÍCHOV IN THE 20TH CENTURY

The Prague railway in its basic structure was settled around 1882 (Binko, 2008), the industrial boom in Prague and especially in Smíchov culminated in the last decade of the 19th century (Broncová, 1996). What followed was difficult time of adaptations to new conditions of modern metropolis, with new, contemporary issues and challenges in a city development to solve. The hottest issue of the beginning of the 20th century was no doubt the transportation. It was a topic underlining most of the decisions taken, most of the changes and considerations about the future of the metropolis (SRK, 1931), and Smíchov was not an exception. New array of transportation modes, increase of automobiles and search for new roads, that all influenced both observed areas, the Smíchov railway station as well as Anděl. The basic tendencies, touching Smíchov, has been continuously reflected in the planning documents since the 1920s.

Railway reduction

The new republic of Czechoslovakia was facing a range of urgent tasks in 1920s, concerning railway: modernization and unification of the railway network or solving the centralization of the passenger service in the Prague railway node followed by reduction of the railway sites in the central areas of the city. The northern part of Smíchov railway station, the area of Budějovická a Duchcovská station, was a logical area to take out from the railway land use, but the negotiations of State regulation commission with the Ministry of railway failed at that time (Fig.2) Nevertheless, the idea was not given up, and regularly appeared in the land use plans and development strategies throughout the 20th century.

New communication system

In search for higher capacity of communications for automobiles, the old streets were widened and new roads were traced. Considering the area of Smíchov, the plan of new road system, later known as Basic Communication System (ZKS), proposed the location of the inner ring road right along the rails of the Smíchov station (Fig.4). In its 1970s and 1980s versions, partly modified after the Velvet revolution, this communication put significant parts of Smíchov in risk of demolition (Langhammer, 2001). Nevertheless, the idea was not given up, and regularly appeared in the land use plans and development strategies throughout the 20th century.

Metro

The original corner inn U Zlatého Anděla, which for almost a century marked the important crossroad Anděl, was demolished in 1980, to make way to the construction of metro line B. The station Anděl with new low rise construction of vestibule was opened in 1985.

Ringhoffer factory

Ringhoffer factory went through a massive expansion in the 1920s, buying most of the competing factories and becoming the biggest carriage producer in the world. (Janková, 2009). Since the regulatory plan of the 1927 shows the factory sites regulated in the shape of symmetric blocks with a range of public buildings, it is possible that new location for the factory was searched for already at that time. The Ringhoffer factory was put under state control right after the world war II, renamed on Tatra Smíchov, and in 1963 the company became part of the united engineering company ČKD, providing Czechoslovakia with tramway production (Janková, 2009).

Development of the quarter

The number of inhabitants of Smíchov was decreasing since 1980s and the decrease was continuing in 1990s. Work opportunities were vanishing from Smíchov, the housing of existing railway bridge, or slightly to the north of it. Its incorporation into the ZKS scheme in the 1980s would also mean a significant increase in car traffic in Smíchov. The updated idea of bridge is also part of the contemporary local plan as well as the most recent land use plan of Smíchov.

Development of the quarter

The number of inhabitants of Smíchov was decreasing since 1980s and the decrease was continuing in 1990s. Work opportunities were vanishing from Smíchov, the housing
ing pool was significantly dilapidating, whereas some of the housing blocks were already demolished in order to make way to new roads. Some areas of Smíchov were simply not attractive enough to keep dwellers. (Temelová, 2006)

SMICHOV IN POST-COMMUNIST TIMES

After the Velvet Revolution of 1989, the Sleeping Beauty was waken up, as Jean Nouvel later put it (Fialová, 2000). Prague opened for the foreign investments, and Smíchov with its potential was on the top of the list of international developers (Temelová, 2006).

Planning of the last decades

First investors, NN Real Estate and MBO, interested in real estate development in Smíchov, started negotiations with the authorities of Prague 5 district in early 1990. The strong and concentrated development focused almost exclusively on the area of former Ringhoffer plant and the plots in immediate vicinity. The first one was Zlatý Anděl, an office building developed by ING and designed by Ateliers Jean Nouvel in collaboration with local partner A8000, finished in 2000 on the site of former Golden Angel Inn. In the next years, other buildings followed, such as shopping centre Nový Smíchov on the site of the Ringhoffer factory, Anděl Park office house, a block complex designed by D3A studio, Anděl City and Smíchov Gate, both office complexes.

The area of the Smíchov railway station remained in a “Sleeping Beauty mode” for another ten years. The land use plan of 1999 marked it as “large development area”, banning it from construction until a detail urban plan is worked out and approved. The development of railway station came into planning after 2000, with a master plan “Smíchov – south” elaborated by local office VHE for the City Development Authority (ÚRM) (Fig.6). The objective was to revise the transportation planning and focus the urban development on two areas – northern part of the Smíchov railway station, and strip of land between the railway and the river, including the river bank and the Čísařská louka island.

In 2005, Smíchov Station Development was formed, a joint enterprise of the land owner (Czech Railway – CD) and developer (Sekyra Group). Range of urban studies for this client followed: by SIA design 2005, by VHE in 2007, and the most recent by A99 architects in 2011 (Fig.7). The scheme for the northern part of the railway consisted of proposal of a transportation node, combining the reduced rails, integrated with other means of public transportation. The permission process for planning stopped in 2013 with very little prospects for finishing.

Development of the district

After the 1989, development of Smíchov railway station and the traditional core of Smíchov by Anděl crossroad are taking significantly different paths.

The generous intentions to redevelop Smíchov into a new successful city district goes hand in hand with the tendency towards polycentrism on the city planning level (Hořejší, 2006). Nevertheless, the overall improvement of physical environment, including the public space and reconstructions of existing buildings, is concentrated mainly along the main business roads of Anděl location, whereas many other locations like Smíchov, such as Plzničská street, Na Knížecí, Hofeťská nábřeží, or even the Smíchov railway station, remain isolated and neglected (Temelová 2006).

After 1989, the railway company started to revise the strategy of the railway node in Prague, a strategy established in 1960, only with slight modifications lasting until today (Binko, 2008). Concerning Smíchov railway station, there are several issues to be implemented to the future scheme of adaptation of some rails to the high speed corridor, where most of the existing rails would be integrated into local and regional transportation system, with increase of capaci-
ity of the connection to the Prague Main station. Also, a new multi-modal storage system of city logistic should be tested in the scheme. (Hořejší 2008).

Fig. 8 Number of the passengers on the stations of public transportation in Prague

For the development of land on Anděl, there was an array of factors making it the first choice of investors: The site which was soon available, single owner plot, chance to be the first. There were conditions created from the previous period: large abandoned site, fast connection to the city centre through metro and efficient connection by road network. Another conditions emerged after the 1989: strong and brave investor and collaboration of public and private realm (Temelová 2006). The conditions for development of the Smíchov railway station were different from the very beginning: there was a need to revise the railway development plan, need for negotiations with strong railway industry and coordination of more actors. The declining role of Smíchov railway station, even in its substantial function of important regional rail, is well seen from the chart of passen- gers, when compared to Anděl (Fig. 8.).

Outline of possible future development

As a conclusion, I would like to trace a possible outline, conditions, constraints and opportunities of future development in Smíchov.

Railway station as a catalyst

European trend of recent decades is to realize efficient change among various modes of transportation in an environment, which is beyond a purely infrastructural facility, a multifunctional building of commerce and services, marking the core of the district. The railway station acts as a potential catalyst of development and a tool for urban regeneration (Körner 2007).

Railway station as a constraint

Integration of the railway into the planning scheme could be an opportunity, as well as a threat, considering the complex multi-level issues and the number of actors involved. Neither the multi-actor governance, interaction of various stakeholders nor negotiations on the level of planning have tradition in the planning system of the Czech Republic (Tosics, 2010).

Overall uplift of the district

Despite the changes in urban structure are described as fragmented and not very far reaching (Temelová, 2006), the new positive image of Smíchov has been conveyed and as such has a potential to attract even those investors, who would not invest in a risky project in completely dilapidated area.

Sequences in development of Prague

According to Biegl (2008), the first decade after the Velvet Revolution was marked with the construction taking place in gap sites. Since the turn of millennium, the attention of developers is fully concentrated on large development areas, including the neglected areas of railway stations. With carefully regulated development, this concentrated energy and means are powerful conditions of meaningful urban transformation, as well as a possible danger under not very consolidated planning conditions.

Physical environment constraints

The land to be potentially developed is highly fragmented due to the interaction of terrain (long narrow valley along the river) and expansive infrastructure (rails and busy communication of the ring road). The missing connection to the other side of the river is essential.

General issues

There are certainly many general issues, related to the specific conditions of the land development in the Czech republic, analysing the context of contemporary planning, which cannot be comprehensively named individually. There are at least few issues picked up randomly from this long list: The under-financed railway, along with other public services, especially in comparison with the investments into individual car transportation. Randomly emerging ideas, which are not in compliance with overall efficiency nor with the strategic plan (Binko, 2003), (Tosics, 2010).

Further conditions of the meaningful urban planning, relat- ed to infrastructure development, will be a subject of further research.

Acknowledgement

This paper was worked out with funding provided by Studentská Grantová Soutěž in project number SGS13/226/OHK1/3T/15 (Transformation of the City Structure in the Context of Globalization and Sustainable Development).
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Abstract
Although European countries today face similar problems regarding transposition of manufacturing to other continents, throughout Europe itself, we can notice different treatment regarding remaining industrial heritage or industrial environment in general. Today, we may still observe quite strong differences in cultural landscapes of the post-communist and non-post-communist countries.

In concordance with the main general questions of this conference, we may narrow the problem of the industrial site landscapes down to following questions: „How can we understand our bequest of the communist face to face with our Westernneighbors?”; „How do we care about the industrial site landscapes in different socio-economic framework?” and „how are we going to implement the recent design tendencies?”

This article tries to respond to the stated questions by the means of investigation aimed to the comparison of two case studies: Schio in Italy and Nové Město pod Smrkem in the Czech Republic.

Keywords | Key phrases
Industrial heritage, landscape, garden, Schio, Nové Město pod Smrkem

INTRODUCTION
Although European countries today face similar problems regarding transposition of manufacturing to other continents, throughout Europe itself, we can notice different treatment regarding remaining industrial heritage or industrial environment in general. Today, we may still observe quite strong differences in cultural landscapes of the post-communist and non-post-communist countries.

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This article tries to respond to the stated questions by the means of investigation aimed to the comparison of two case studies: Schio in Italy and Nové Město pod Smrkem in the Czech Republic.

METHODS
There are two case studies to be compared. As it is impossible to find two identical sites, the choice was done on the basis of the similarity of some of the following characteristics to be read especially in their historical review. These characteristics may be also summarized like:

1. both case studies have relatively similar natural conditions regarding the relief, water sources, climate, and also pre-industrial cultural landscape landuse,
2. both case studies have comparable sociological features like number of inhabitants and workers, inclination to philanthropy of the industrialists,
3. both case studies have comparable industrial heritage regarding types of public spaces, gardens etc.,
4. both case studies have had different development regarding the communist era but previously used to be part of the same country, i. e. of Habsburg monarchy.

The sites were compared from the view of a visitor of the site. The attention was focused especially onto landscapes like gardens, foregardens, parks, alleys and other public spaces.

The observed towns are Schio in northern Italy and Nové Město pod Smrkem in the northern Czech Republic. While Nové Město pod Smrkem was observed in November 2011, Schio was observed in November 2012.

The brief history of the industrial heritage in Schio
Schio had become an important centre for wool manufacturing already by the 12th century (wikipedia - Schio). The protoindustrial phase lasted from the 18th till the first decades of the 19th century (Fontana 1986, p. 73).

This protoindustrial phase can be caracterised with a system of artisans, merchants and farm labourers (Fontana 1986, p. 110). As the phases of the fabrication became still more and more specialized, the role of the enterpriser gradually crystallized from the function of the coordination of these phases from the raw material to the final commodity and its sale through few generations of certain families (Fontana 1986, p. 111). One of these families was the Rossi family. While there were wool manufactories with approximately 30 workers between years 1806-1811 in the Kingdom of Italy (Fontana 1986, p. 144) and the population of Schio about 6,...
Rossi), although the Schio region was permanently cultur-ally influenced by Trentino (Reato 1986, p. 491.), perma-nently kept by the Habsburg Monarchy already since 1803 (wikipedia - the growth of Habsburg territories).

Antonio Rossi teamed up with architect Antonio Caregaro Negrin from Vicenza and both of them were influenced by the social utopism, so actual in that time, presented by Owen, Saint Simon, Fourier, Cabot, Godin etc. (Tavone 1986, p. 697-8). For his work, Negrin studied not only big industrial towns but also small ones like Schio, Mut-house, Saltaire or Vervins (Tavone 1986, p. 697).

In front of the factory, the romantic garden called the Giardino Jacquard was projected by Negrin and realized between 1859-73. The garden consisted of nice views of interesting architecture, water fountains, and a plenty of plants, including woody species and flowers, pathways and artificial caves (Tavone 1986, p. 691).

In 1861, Alessandro Rossi established the Cooperative As-sociation for the Mutual Assistance ("Societa di Mutuo Soc-corso") (www.alpcub.com).

Between 1862 – 1864, the building of the „High Factory” ("Fabbrica Alta") was constructed (wikipedia - Fabbrica Alta, www.alpcub.com). The enterprise had about 2,050 workers in a house for spinning cotton (p. 49) and light cultural ties to nearby Lusatia (Anděl, Karpšil et al. 2002). In medieval times, the region became a part of Bohemia, which became a part of the Habsburg Monarchy in the 16th century and remained under the Habsburg Monarchy until 1918.

In 1937 about 1.084 workers (Tima 2010).

In medieval times, the region became a part of Bohemia, which became a part of the Habsburg Monarchy in the 16th century and remained under the Habsburg Monarchy until 1918.

The brief history of the industrial heritage in Nové Město pod Smrkem

Nové Město pod Smrkem is situated in the hilly Fridyant region under the Jizera Mountains. The region was colonized in 13th century by invited German speaking inhabitants who earned their living both on agriculture, especially on keep-workers in the house of the court. Their families lived in the old, often ill kept, cottages. In 1866, Schio, as a part of Veneto, was ceded to the King-dom of Italy (wikipedia - Kingdom of Lombardy and Ven-tia) and Alessandro Rossi became an important Italian polit-ics (wikipedia - Alessandro Rossi).

The period between 1866 and 1915 is characteristic with a strong inner immigration from other regions (Schio, causing its urbanisation growth (Reato 1986, p. 491.-).

In 1872, Negrin was asked to make a project of the New Worker Quarter ("Il Nuovo Quartiere Operaio"), (Tavone 1986, p. 699). The first Negrin’s conception of the quarter was a single big park with the worker houses of different types, and a path axis leading towards the factory building. This conception underlined the idea of the worker community.

The different conception – the rectangular one – of the worker houses was realized later (www.alpcub.com). Nev-ertheless, the definitive image reached to the European social towns especially thanks to its close relationship to the landscape with a number of gardens and alleys (Tavone 1986, p. 709).

Antonio Caregaro Negrin also projected different buildings aiming to make the workers’ life in the town better; the-ater, the church Antonio Abate (from 1879) or the Lanifi cio (1874), (Tavone 1986, p. 705). The social Schio was also complemented by public baths and abattoirs (www.alpcub.com).

In 1874, the factory reached 4.017, and in 1887, 4.762 em-ployers (Reato 1986, p. 491). Negrin projected also a villa for Alessandro Rossi and Giovanni Rossi between 1876 – 1880 (Tavone 1986, p. 705).

Apart of Schio, Negrin and Rossi transformed also some other villages in its neighbourhood, for example Piovene Rocchette or Santorso.

In 1886, p. 709).

The difference in the cultural heritage consciousness Schio seems to be more conscious of its industrial heri-tage landscapes of Schio and Nové Město pod Smrkem. These differences can be summarized into two main points: difference in the cultural heritage consciousness, and dif-ference in the maintenance.

The difference in the cultural heritage consciousness Schio seems to be more conscious of its industrial heri-tage landscapes of Schio and Nové Město pod Smrkem, ranging from the regional scale to different places of the town.

Passing through the town of Schio, the visitor can observe the historical gardens of the industrial era making a clear part of the cultural heritage in Schio. The public in Schio can also admire the beauty of the well-preserved Giardino.
Jacquard. “Giardino Jacquard – the garden of Schio” is a public garden dedicated to workers, with its opening hours written on a board where you can also read:

“An Italian place of art, of history and of nature, a unique garden established by an industrialist for his workers. A place to treasure, which occupies a special post in the history of Schio, a place we want to cultivate and know. Our place of heart.”

The exemplary approach includes the reflection of the industrial heritage in the contemporary development of Schio. Outside billboards show the project of the industrial buildings and areas reused for different public spaces and vegetation areas, making the integral part of these projects (see Fig. 1). Some of them have already been constructed, for example housing re-use with the under-level-parking which enables safer pedestrian use of its outside space without motor traffic (see Fig. 2). Other converted buildings are already re-used for shopping and for other facilities. Industrial reminders – for example the bust of the delegate worker chief Alìse Conte – make part of the resolutely modern design of these public spaces containing also other contemporary statues (see Fig. 3). Also these buildings are surrounded by a disable friendly public space with a great portion of firm surfaces (see Fig. 4).

Fig. 1 billboard on industrial area reuse development in Schio
Fig. 2 public spaces surrounding reused factories in Schio
Fig. 3 reminders of industrial past in modern public space in Schio

There is a different situation in Nové Město pod Smrkem. The factory area is not officially accessible and the information about its ownership and plans for the future are not evident. In most of cases, the information about the contemporary use of the factory buildings can be read from post boxes only. Also the huge industrialist park is privatized now but without maintenance, and the adjacent industrial area seems more like a garbage space (see Fig. 5).

Villa Klinger was bought by a German owner and it is one of the few renovated buildings used for purposes of private enterprise. The surrounding part of the large park has been locked up, and the terrain of the garden was adopted for parking of the cars connected to the villa re-use (see Fig. 6).

The restoration of the public spaces surrounding the factories and administrative buildings of the previous enterprise in Nové Město pod Smrkem consists usually only of incomplete pieces of new pavement in the streets without any architectural additional conception or invention (see Fig. 7).

Fig. 4 underground parking in reused buildings in Schio
Fig. 5 changeover from factories area to Klinger’s park
Fig. 6 ground shaping for car parking in Klinger’s park adjacent to the villa
Fig. 7 restoration of public space surrounding the factory in Nové Město pod Smrkem

The difference in the maintenance

Industrial heritage landscapes are much better maintained in Schio than in Nové Město pod Smrkem.

The main industrialist’s villas and gardens in Schio as well...
as the garden Jacquard dedicated to the workers are well
maintained in a way of sensitive monument preservation,
and make a living part of the cultural heritage of the town (see Fig. 8). The habituses of trees in these gardens are
usually well developed. Different decorative species includ-
ing palms have been preserved. The grass in these gardens
is usually well cut, the sandy surfaces well maintained, the
shrubs are cut precisely, and ornamental beds are planted.
Even a subtle construction and the glasshouse in the gar-
den Jacquard are standing there as before, the garden is
naturally fit to the house, and both look like untouched.

In Nové Město pod Smrkem, the park has been quite ne-
glected for decades of years already, so that the vegeta-
tion continuously transforms to a forest and almost all trees
have already lost their solitaire habitus (see Fig. 9).

There are the functional alleys in the avenues and public
parks dating back to the industrial era in Schio (see Fig.
12). They are still composing the main urban structure of
the town. Alleys in Nové Město pod Smrkem stand off the
urban structure and their potential is under-used (see Fig.
13).

Although one can observe somewhere spontaneous veg-
etation on its roof, also the most extensive vegetation sur-
rounding the factory consists of trees with well
developed habituses thanks to the uninterrupted basic
maintenance (see Fig. 10). There has been lack of any
maintenance for decades of years already in the neigh-
bourgood of factory buildings in Nové Město pod Smrkem
(see Fig. 11).

Regarding former gardens of worker houses, the main-
tenance in Schio and in Nové Město pod Smrkem is com-
parable: in both cases, the foregardens consist of varied
individual adjustments depending on their owners.

The problem of maintenance is evident in case of the
stream bed which was regulated in the industrial times to
provide power to the factory machines. While in Schio it is
in the condition of a functional construction surrounded by
vegetation and incorporated in the urban structure of the
town (see Fig. 14), in Nové Město pod Smrkem, the con-
struction is in worse condition, apparently without incompo-
sation in the life of the town (see Fig. 15).

CONCLUSION AND DISCUSSION

The main difference between the industrial heritage in
Schio and in Nové Město pod Smrkem can be observed as
difference in the industrial heritage consciousness and a
difference in the maintenance.

These two features are probably connected.

In Schio, the villa and garden are open for the public as
a historic monument, while the areas of the factories are
quite clearly dedicated both to the public (commercial) and
housing, and it is quite clear that the users are the people living there. In Nové Město pod Smrkem, most of the area concerned is detached from the life in the town, it is private and looks more like forbidden space where no-one has right to know what happens in it and the property seems more like unclear to the public.

In Schio, the public seems to be consciously educated about the cultural heritage of the industrial era, while in Nové Město pod Smrkem there are very few explanations of the industrial heritage, so people in the town are supposed to be not conscious of it very much.

Schio was an industrial town which is well known as a town of philanthropists, which may have promoted better maintenance and monument preservation also for this ideology. But philanthropist intentions are not excluded neither in Nové Město pod Smrkem.

In Schio, the industrial heritage is understood as something more public, national or citizen, while in Nové Město pod Smrkem the industrial heritage is understood as something more private, not related to other parts of the town.

Schio itself shows different approaches to the industrial heritages as it is a living mosaic of the illustrative examples of these approaches. This approach may be an inspiration for the post-industrial sites in the post-communist countries.

Dedication

This article was supported by SGS12/202/OHK1/3T/15 „Dědictví průmyslové éry/ Úskalí nového využití”.

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Note
All published photographs were made by the author.
Rijeka: Many Challenges of a Waterfront Transformation

Sara Stojaković

Abstract

The Croatian city of Rijeka, situated on a northern part of the Adriatic Sea, has always been most closely connected with its port function. It was first developed as a port and continued to grow along with it. A new wave of expansion of harbour facilities and factories came in the alter-period along with consummation of all the available land between the city and the sea. Some of this land has been made obsolete in recent times and is now in derelict state waiting for new uses.

For decades, Rijeka was a symbol of success and productivity while its biggest factories and shipyards employed thousands of people and attracted many workers from all over former Yugoslavia. The end of prosperity for many factories came during the transition period that followed the disintegration of Yugoslavia. And while most of the port cities across the world also experienced their harbours to become obsolete and abandoned, in Rijeka it was made more severe by the collapse of the petrochemical industry, which was the mainstay of the city’s economy. Today, while the harbour retains its important position as the main Croatian port and among the biggest in the Adriatic Sea, new and urgent issues regarding unused and derelict former industrial and harbour sites are being raised.

This work examines the possibilities and potentials of former harbour areas in making a new and positive image of a city which is sustainable, healthy and productive, while also reflecting on current problems of transformation of these areas in Rijeka. These unique sites pose valuable opportunities for making new public spaces and connecting the city again with its waterfront, and at the same time addressing the issue of a lack of new territory for the city’s development. The work will point out the most prominent abandoned sites in Rijeka: Hartera, Delta and the Porto Baross harbour area, Torpedo and the former refinery site Mlaka on which the main focus is given. The work deals with the strategic importance of these areas for the future development of the city.

Keywords | Key phrases
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port areas, derelict industrial sites, industrial heritage, the city of Rijeka, Refinery site Mlaka, restructuring

INTRODUCTION

Processes of restructuring the former port areas are one of the most prominent and most important urban interventions in the contemporary city. They represent not only a great opportunity for further development of the city and its port but are absolutely essential to the healthy functioning of the city. Because they are crucial for making an image of the contemporary city some authors are calling them the paradigm of a post-industrial city (Brutomesso, 2001).

The Croatian port city of Rijeka, situated on the north-west part of the Adriatic sea has always been an important port for this part of Europe as well as an industrial centre. These activities have also determined the city’s image as an industrial port city, even boring and dirty. However, during the second half of the 20th century many changes in port technology and economy occurred that resulted in abandonment of large territories of former port and industrial facilities which have therefore been freed for new, more urban uses. These sites now offer an opportunity to become the new city waterfront – a part of the city that “allows expressions of hope for urban vitality” (Marshall, 2001:4).

However, the opportunities of restructuring the port areas as a tool that could launch a new identity for Rijeka have not yet been used to a greater extent. There is no overall city strategy for transforming these areas and no larger individual site has been restructured that could become a “flagship” project. All in all, we can conclude that Rijeka is far behind with these processes that characterize the development of contemporary port city.

The paper presents the most significant waterfront sites that are now in a derelict state but at the same time present a big potential for creating a new, positive image of a healthy, sustainable and modern city. Special focus has been put onto former refinery and petroleum port at Mlaka.

The remainder of the paper is organised as follows: description of the spatial characteristics of port-city relationship in comparison with general port city typology; historical development of the port as a basis for understanding contemporary urban situation. Third part of the paper deals with specific sites and their different potentials and plans for transformation into urban areas.

PORT-CITY RELATIONSHIPS IN RIJEKA

There are certain characteristics of port cities that make them all appear similar no matter how different and far away they otherwise can be (Marinović-Uzelac, 2001). These similarities go far beyond the mere visual experience. The port city as a special urban typology is a combination of the complex relationships between the port and the city which has, through the history, always been a dynamic one, a relationship that Brutomesso describes as: “one of the main factors promoting the growth, the formation and accumulation of wealth and the creation and promotion of the image of the city-port.” (2006: 23) Because of their ability to adapt and evolve, some port cities have a very long continuity that can trace their origins back to middle age or even antique period as is the case with Rijeka.

Ports are not only determined by their relationship with a city but also with their natural physical surrounding - being the places on Earth where the natural landscape had been changed to the greatest extent. Since Rijeka is a Mediterraneo- nean type of a harbour (Prešić, 2001: 165) - characterized by deep waters and a lack of territory for the development of port structures - the processes of excavation and filling of the new land have determined the city’s morphology by reshaping the natural coast modifying it to the spatial requirements of the harbour. The lack of territory due to the steep terrain that is rising from the sea shore has been one of the major problems in city’s development until today. The second big issue is a typical problem in port cities where waterfronts are separated from the city tissue by huge port, in...
dustrial and infrastructural complexes. This results in a lack of public spaces and promenades along the sea shore, the spaces which represent a special quality for an urban life.

Historical development

The main historical reasons for founding the city at its exact location were suitable natural conditions - the mouth of the river Rječina in a protected bay. The close connection between the city and its port is also obvious in the name of the city which literally means river in Croatian, indicating importance of the port inside the river as a main reason for founding the city in prehistoric era (Matejčić, 2007:15) and later by the Romans. The port remained inside the river mouth until the beginning of the 18th century when Rijeka was awarded a special status of a free port city inside the Habsburg monarchy and, as a result, trade and industry began to develop more intensively.

During a long period, constant accumulation of silt in the river mouth presented a big difficulty for the port activities. This issue was finally resolved by digging through the new river bed and at the same time constructing a big harbour in a sustainable way. The main outlines of the port and city were defined at the turn of the century and haven't drastically changed since.


The after war period and the years between 1960 - 1990 are considered to be the most successful ones for the port of Rijeka. During this time, Rijeka was a symbol of success for Yugoslav economy with the biggest factories and shipyards employed thousands of people and attracted many workers from all over former Yugoslavia. Due to the strong growth of port traffic and industry that requires a lot of space, the existing port and its physical capacities were no longer sufficient and consequently, new spatially-dispersed port basins and specialized ports in Kvarner bay were constructed. After 1990 the port of Rijeka faced major problems of decline in efficiency and less traffic. The industrial sector was also heavily damaged - during the transition period that followed the dissolution of Yugoslavia, the port at Miška and former torpedo factory. These are areas of important industrial heritage and each of them has a specific industrial and natural features that are in urgent need of new uses. In terms of restructuring, their planned uses and functions should be complementary and the sites interconnected via public space.

NEW CITY IMAGE

Because of the numerous problems mentioned above, in early 2000s began the process of modernization and increased investment in the port of Rijeka which is being conducted in the framework of the Gateway project. The aim of the Gateway, as stated in the project description, is the modernization of the port by increasing its efficiency “synchronization of port and operational requirements with the urban part of the city area” (http://majađela.com/hr/o-projektu), or the conversion of some port areas into urban ones. The urban component of the project is centered around the transformation of the passenger harbour and a large Delta area, both in the city centre. Some steps towards more civic urban waterfront have already been made – the part of the old industrial zone was converted into passenger harbour with an open public space that was until recent a parking area. Also, a new passenger terminal and port control centre were built on a prominent location at the beginning of a breakwater. The long breakwater called Mollo long, one of the symbols of Rijeka, has also been reopened as a 1740m long sea promenade after being closed for public for almost fifty years.

Still, the largest waterfront sites in Rijeka are yet to be transformed. Areas, whose transformation could change the overall image of the city and which have the greatest potential are: industrial complexes of the former factories Hartera, Rikard Benčić and Torpedo, port-areas Delta, former refi nery and petroleum port at Mlaka and former Torpedo factory. These are areas of important industrial heritage and each of them has a specific industrial and natural features that are in urgent need of new uses. In terms of restructuring, their planned uses and functions should be complementary and the sites interconnected via public space.

Delta port area

The Delta area has an interesting genesis of a place that has evolved together with the historical harbour and which was, as a result of centuries of natural deposition of silt by the river and man-made fillings of the land for storage and port facilities. With time, Delta area has grown into a large large surface of peninsula-like land between the new and old river bed of Rječina, called Mervi kand (the “Dead channel”). From the end of the 19th century this site was used as a storage location for timber and in front of it a special timber port called Porto Baroços with its own smaller breakwater was built.

Because of its location in the city centre and large flat surface suitable for many different uses Delta area represents the central waterfront transformation project for Rijeka and the most important urban component of the Gateway project. It is also the most complex component of Gateway since the city and port authority do not have any real experience in managing the restructuring of former port areas into urban ones.

In the framework of the Gateway project in 2006, danish offices COWI i Gehl Architects made urban planning guidelines and proposal for the transformation of the area that was presented on the project’s website. The proposal was based on a new land uses previously determined within the Master plan. The new programmes include: a big public park on the northern tip (replacing the big parking area), nautical marina in the mixed use area as well as a public waterfront on the southern part of Delta. This year, a step forward has been made by opening a public competition for urbanistic solutions for this area which is at the moment still open. Apart from the programme in the planning guidelines the competition requires new public buildings: multifunctional hall for concerts and events and a new ferry terminal for ferries.

Also, the wastewater treatment plant should be integrated into new functions of the area. One of the biggest challenges for the success of the project will be how to create a meaningful new place for the public concerning the stress on commercial aspects by the port authority that still holds concession of the area and manages big part of the pro cess.

Fig. 2 Aerial view over the Delta area.

Hartera paper mill

The former paper mill Hartera is located in the very canyon of the Rječina river close to the city centre. Since its foundation in 1921, it has been one of the symbols of the thriving industry in Rijeka until it was shut down below down at the end of the last century. The factory benefited from a location by using the energy of the river for its drivers and first steam engine in Croatia was also first introduced here. Being situated inside the dramatic landscape of a river canyon, the former paper mill area has unique landscape values and also makes a logical part of the planned (and existing in the past) Rječina promenade (Magaš , 2005:434) that would connect the city center with the nature in

174
175
its immediate hinterland hence, contributing greatly to the urban qualities of the city. Although some parts of the complex are being used as offices and services in privatized and reconstructed factory workshops (ibid.) and part of the building stock is occasionally used as a stage for cultural events (such as famous music festival Hartera) huge potential of this space - industrial heritage and landscape qualities have not yet been fully realized.

Torpedo factory

The complex of the former Torpedo Factory is a specify site because at this location the first torpedo was invented in 1866, followed by founding of the first torpedo factory in the world. The most important industrial heritage monument is a launching station for torpedo, protected as a cultural monument of international significance that is also included in European Route of Industrial Heritage (ERIH). Nonetheless, the station is currently in derelict state and threatened by collapse.

During the time of Yugoslavia Torpedo factory was a well known manufacturer of tractors and employed around 2790 workers. (Dusenbury, Zrilić, Mrakovčić Supek, 2005) and closing down the factory in 1989. left a profound economic consequences for the city.

This large factory complex takes over a vast area of 70,000 m² at the sea shore and has its own marina. As such it presents a huge potential for restructuring. Currently, some minor production and business activities being carried out in the complex, but there is no overall plan or strategy that would encompass the entire area and find a new use for the three largest factory halls owned by the city. The port of torpedo is planned to be converted into a fishing port with support facilities which would be a suitable introduction of maritime activities in future urban area.

Oil refinery and petroleum port at Mlaka

The former oil refinery and petroleum port is situated in the Mlaka city district, close to the city centre and it directly borders the former Torpedo factory site. Together, they are forming a vast industrial complex on the waterfront. The site presents a strategically important area for Rijeka that provides great potentials for transformation into urban area that could trigger the development of this part of the city and contribute to the overall new city image.

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In the sixties, the refinery became surrounded with the city that hindered its further development and a new refinery was built on a more suitable location. However, some parts of the refinery were still in function until 2009. when all productive activity was finally ceased, leaving behind severely contaminated ground a major problem of the site.

Following the shutdown of the facilities the city council started with first steps to enable the transformation of the area by changing a spatial plan and on this occasion a web site for citizens’ information and suggestions (http://www.vojko-obersnel.com/hr/e-konzultacije/zona-bivse-rafineriye-je-mlaka) was opened.

The planned conversion includes an area of 15 ha, i.e. the central part refinery’s former facilities. The biggest drawback of the existing proposal is that the area included in the future plan for restructuring does not include the immediate seafront in the center of the site thus depriving it of greater spatial qualities.

In the next paragraph, the most significant characteristics of the space will be described and general guidelines and ideas for the restructuring based on existing qualities.

Due to its central location in the urban fabric, the refinery has a good traffic connections. At the same time, some of the traffic routes act as barriers in the space by transecting it longitudinally. The most direct traffic connection is via the street of Milutin Barač that runs the entire length of the refinery. At present, the street looks shabby, but due to low traffic, high-quality surrounding architecture and various mixed-use buildings in the area it could become a significant high-quality open space that introduces urbanity and vitality to the area by continuing the traditions of production and bussiness. The other traffic lines are regional railway in the northern part and large railway infrastructure that serves the port, both of which are suggested (by the Master plan) to be transformed into fast city rail. This scenario would greatly improve the chances of success for the future area. Another new possibility for Rijeka’s public transport would be introducing a public ferry line with one of the station at Mlaka.

Seafront and views towards the sea are one of the main qualities of the area and offer an opportunity for creating a open public space on waterfront with various functions and uses as a central feature. It is particularly important to link the former petroleum port with Torpedo complex and its launching station as an important landmark.

Another specificity of the area is its history as an important industrial centre with many structures and buildings that create an unique identity of a space. The theme of industrial heritage should be an important part of the programme of the restructuring, especially because Rijeka is lacking in such a content.

To conclude, one of the main goals of restructuring the area is connecting it with other parts of the city, (especially for pedestrian traffic and public transport), opening up to the sea and generally, integrating the presently isolated location into the city tissue as a strategically important area for its future development.
CONCLUSION

Restructuring of port and industrial facilities on the sea front is one of the most significant processes of the development of contemporary city that provides an opportunity to create a new, positive image of a city at these at prominent locations. As such, these areas are of a strategic importance for the development of Rijeka. The paper presents an overview of derelict industrial and port areas in Rijeka and stressing their potentials and quality for the transformation into new urban uses. The main emphasis was on the former refinery and petroleum port at Mlaka because of its location near the city centre, large surface and because there is no clear vision or plans for its transformation. In future, Rijeka expects big challenges of managing these processes on many sites that will determine its future image.

Acknowledgement

The author would like to thank prof.dr. Kaliopa Dimitrovska Andrews, univ. dipl.inž.arh for her long support and help during the research of the topic.

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INTRODUCTION

As one of the most important rivers in Europe, the Danube flows through central and south-eastern Europe emptying in the Black Sea. Almost 3000 km long (2857km), the Danube is second longest river in Europe after Volga that con-nects more than 80 million people of different nations and cultures in 19 different countries within the Danube River Basin (DRB). It is characterised by economic inequalities as well as diversity through Behrgспособности, and the Danube remains today partly as a natural physical element, yet also as a mental contextual construct (Andrejic-Djukic, 2012).

<table>
<thead>
<tr>
<th>Country</th>
<th>Total Population</th>
<th>Capital Population</th>
<th>% of Total Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austria</td>
<td>8 451 860</td>
<td>1 741 246</td>
<td>20.6%</td>
</tr>
<tr>
<td>Hungary</td>
<td>9 937 628</td>
<td>1 737 000</td>
<td>17.5%</td>
</tr>
<tr>
<td>Serbia</td>
<td>7 789 000</td>
<td>1 731 425</td>
<td>22.2%</td>
</tr>
</tbody>
</table>

Table 1: total and capital population in researched metropolises

Since the 1960's the exclusively accelerated urbanisa-tion of the Danube metropolises led to the alleviation of the connection to the natural element river. The urban river landscape is terrain for many qualities and means in soci-ety. Every perspective of society meets in the landscape, cultural, aesthetic, social as well as economic. Urban open space in Danube metropolises in general is going through a transition as a consequence of social and global changes. Open space should be designed and produced as place of transnational communication, transformation of ideas in culturally diverse forms and designs. It is an intersection between art and architecture, between landscape and city, tradition and experimentation. In order to be able to realise this, the Danube metropolises must convert old and new values into an attractive and well-defined public image of the river on a regional level. A differentiated new Danube character should be integrated in 21st century quality. Urban open space on the inner-city Danube watersides in three selected metropolises was in the 1980s neglected and almost without any public use. Unlike Budapest and Belgrade, Vienna's inner-city core was not situated close to the Danube at the beginnings of its existence and for centuries later. The integration of the whole Danube space in the urban city structure did not occur until the beginnings of the Danube City in the 1990s. The Danube Canal bridges were reconstructed in the 1960s and the Canal was used exclusively as traffic and transportation area (Stadtentwick- lung Wien, 2001). The Danube river today consists of Old Danube, New Danube, Danube Island and Danube Canal. They represent high quality and most important leisure and recreation areas as well as attractive locations for living and working. Vienna spatial planning in 1980s and on was focused on designing and developing the area along the Danube (today's Danube City) leaving the Danube Canal watersides socially deserted.

In Budapest, and respectively in Belgrade, the Danube flows through the old inner-city facing the monumental landmarks and combination of traditional and modern ar-chitecture. The integration of the Danube river in the Bu-dapecaspandscape took place already in the 19th century, much earlier than in the other two metropolises. The Danu-be divides Budapest into two parts which are very differ-ent in terms of utilisation and topography. Late 19th century and first decades of 20th century were characterised by the construction of the bridges on the Danube that enhanced the development of Buda and Pest. The Danube is totally integrated only in Budapest in the inner-city area (with re-spect to Vienna and Belgrade) and most bound Danube waterscape of all three metropolises in the study. The ad-vantageous conditions of the Danube bed made Budapest "the bridge city". In 1987 UNESCO placed the Banks of the Danube and historic Buda Castle Quarter on its List of World Heritage Sites. From 1990s and on Budapest has been meeting challenges on a natural and development basis in the inner-city as well as in the rest of the city.

In Vienna, the Danube was targeted as a new urban development area. The Urban Develop-ment Plan 2005 – STEP 05 represents a Master Plan with particular concentration on Danube Canal potential for leisure, recreation and entertainment. With the aim to make the Danube Canal a place for water and peace lovers, but also a meeting point for cultural scene, the Master Plan distinguishes the urban open space for Danube Canal and its use requirements that emphasize the social utilisation. Since the 2000s there have been attempts to sanitise the public image of the Danube Canal watersides as recreation and entertainment space around special public landmarks. The research area in Vienna is located on 3 km long passage of the inner-city Danube Ca-nal beginning with Peace Bridge (Friedensbrücke) along the new development area at the Franz Joseph Bridge (Franz-Josef-Brücke). Since 2001 it has been listed as the UNESCO World Heritage Site along with entire old city centre. The researched section consists of several inner-city canal landmarks such as Blue Danube and Ring Tower, and Wagner’s Barrage and Urania with opposite Unio Tower. These landmarks are culturally and physically affected by the new urban canal urbanization that is to be comprehended as the inseparable arena of the social utilisation within urban open space. Similar project started in 2003 with the urban open space deals today among other things with tackling themes as rehabilitation of historical city centres and modernisation of means of transportation and pedes-trian traffic. With the 2000s the Viennese Danube canal as the inner-city Danube, called "Little Danube", was targeted as a new urban development area. The Urban Develop-ment Plan 2005 – STEP 05 represents a Master Plan with particular concentration on Danube Canal potential for leisure, recreation and entertainment. With the aim to make the Danube Canal a place for water and peace lovers, but also a meeting point for cultural scene, the Master Plan distinguishes the urban open space for Danube Canal and its use requirements that emphasize the social utilisation. Since the 2000s there have been attempts to sanitise the public image of the Danube Canal watersides as recreation and entertainment space around special public landmarks. The research area in Vienna is located on 3 km long passage of the inner-city Danube Ca-nal beginning with Peace Bridge (Friedensbrücke) along the new development area at the Franz Joseph Bridge (Franz-Josef-Brücke). Since 2001 it has been listed as the UNESCO World Heritage Site along with entire old city centre. The researched section consists of several inner-city canal landmarks such as Blue Danube and Ring Tower, and Wagner’s Barrage and Urania with opposite Unio Tower. These landmarks are culturally and physically affected by the new urban canal urbanization that is to be comprehended as the inseparable arena of the social utilisation within urban open space. Similar project started in 2003 with the
“Budapest City Development Concept” that aims to protect green areas and the banks of the Danube by modernising the living spaces on the river and around it. As a part of world cultural heritage, the inner-city watersides are protected and connect with other similar capitals of Europe, especially Central, Eastern and Southeastern Europe. The promotion of Belgrade as a modern European city is considered as important as development of public spaces of leisure, education and communication in order to build perceivable areas of identity. The important tools for obtaining social and economic benefits from the local creative industries, artists, intercultural dialogue. Through small and focused interventions along the Danube watersides, the relationship between places and river as well as chain of social landmarks is developed. In addition, the historical architectural solutions, although it is the most important town-planning aims in Belgrade’s Development Plans, has always been to use natural and architectural values of the city in order to emphasise and develop its brand on local and regional level. The concept of making the Danube promenade and Belgrade Quay (Belgrad raskap) permanent overcomes the unique Danube perception in Budapest (Duna Stratégia, 2010). The Danube Watersides in Budapest re-engineered (from the Chain bridge to Belgrade Quay) to protect the urban heritage and residential buildings. The starting point of the Chain bridge represents the landmark itself. It is important in the urban perception of Budapest because of the fact that it is the first bridge to connect the two sides of the city in 1849. The Chain bridge is distinguished by summer festival as established social event. It is important in the urban perception of Budapest because of the fact that it is the first bridge to connect the two sides of the city in 1849. The Chain bridge is distinguished by summer festival as established social event. The social utilisation is distinguished by social landmarks such as summer festival. In Vienna the research section contains contemporary landmarks such as Grass Pavilion the Ring Tower, Otto Wagner’s Barrage, Urania, and Uniqa Tower. The landmarks as recognizable structures in an open space are suitable for connecting the urban open space with their perception and social utilisation. In Vienna the research section contains contemporary landmarks such as Grass Pavilion, the Ring Tower, Otto Wagner’s Barrage, Urania, and Uniqa Tower. The landmarks as recognizable structures in an open space are suitable for connecting the urban open space with their perception and social utilisation. 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In Vienna the research section contains contemporary landmarks such as Grass Pavilion, the Ring Tower, Otto Wagner’s Barrage, Urania, and Uniqa Tower.
weather allows it to enjoy the freshness of the breeze on the river. Numerous bars with beach flair are accompanied by summer festival and its rich musical programme on the Danube. The cultural projects such as festivals, workshops, talks or exhibitions aim to strengthen the joint identity of the Danube cities. Through further promotion of exchange of experience and knowledge among these potential should be shared. The analysis of local social utilisation is to be understood as a contribution to future social needs in the Danube Region on a macro level and how they might direct future cultural and social rehabilitation projects.

REAL POTENTIAL OF THE DANUBE METROPOLISES

The local urban open space of the Danube inner-city watersides was studied and compared with aim to gain the results and conclusion that will be of joint interest for future regional urban open space development and its social utilisation in Danube metropolises. The cultural diversity and singleness as well as the distinctiveness of landscape and urban patterns offer a great chance for further development of the Danube Region in general. Present problems of planning and designing the urban open space on the selected Danube watersides in extremely important and valuable inner-city centres and "getting back to the rivers" remain still to be solved. However, there are some challenging projects and designs as well as initiatives on regional level that can improve the situation through increased regional Danube perception. The actual utilisation of watersides collide with its existing potential. The current concept of the urban rehabilitation is a process of revitalisation and regeneration of Vienna, Budapest and Belgrade including the conservation of the cultural architectural values and social balance and respect for cultural diversity as basis for shared local and regional identity. The study gives an overview of regional and local initiatives that have already been helping to get together the cities on the Danube. Cultural projects such as festivals, workshops, talks or exhibitions aim to strengthen the joint identity of the Danube cities. Through further promotion of exchange of experience and knowledge among these potential should be shared. The analysis of local social utilisation is to be understood as a contribution to future social needs in the Danube Region on a macro level and how they might direct future cultural and social rehabilitation projects.

Note

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Vrzić, Đ. (2010) Analysis of Planning Activities for Belgrade Fortress Area – Consideration of the area in Master plans for Belgrade (in 1985 and 2003). Detailed urban plan and
Comparing Two Examples of Albanian Industrial Heritage Sites along Urban Rivers

Arttan Hysa

Abstract

The main goal of this work is to compare and contrast two industrial sites by a multi-criteria method. Two sites are chosen from Albania, a post socialist country where important industrial sites have faced the same destination of being abandoned, forgotten or even demolished during post socialist period. Their being inside or adjacent to important urban areas has increased their attraction to several developers. A last example of this fact, is the professional competition entitled ‘Building Tirana Green Future’ where the winning scheme proposed a development plan that simply erase at least 4 important industrial sites. This research aims to analytically show the values of remaining industrial sites in Albania.

The selection process have been performed under certain criteria. The chosen sites had to be inside or adjacent to urban areas, along a river, of different functions and not to be of the communist regime. The second example is an old Wood Factory adjacent to Shkumbini River in Elbasan almost of the same period.

Besides the factual information, these examples will be evaluated by a multi criteria method scrutinizing its values under social, political, economic, and environmental sub themes. This evaluation chart will have a SWOT analysis character as well, since explanations, integrated as notes beside each evaluation criterion, will take place in the chart. Furthermore, a Likert scale evaluation method will be integrated where each criterion will be numerically evaluated by a range between 1 and 5 scores.

By this work some important goals can be listed. Firstly, by this study it will be possible to figure out the threats and potentials that Albanian Industrial heritage holds. Secondly, a multi criteria evaluation method for industrial heritage sites will be introduced and evaluated by a new Albanian research work. The third and last goal is the awareness that this work will generate among Albanian professionals of their industrial heritage sites.

Fig. 1 Superimposition of the existing Tirana map and the newly proposed plan showing the industrial sites along Tirana River that are effected by the new proposal. [Prepared by the author]

Fig. 2 The site of The Meat Factory and the new proposed plan overlapping. [Prepared by the author]

METHODOLOGY

This study is introduced by several general factual information about both examples. The main source of this information have been the main factual source for this paper. Some charts that are part of the next section of this study have been extracted as notes beside each evaluation criterion.
traced from the material published in ‘Arkeologjia Indus- triale; Nje vleresim i Trashegimise Industriale ne Shqip- eri’ book by Albanian scholar Ilir Parangoni. Some information have been filtered from the annual reports of AHF. Another helpful source have been the online published Albanian In- dustrial Heritage database. Most of these materials have been published in Albanian and has to be appropriated into English.

Besides this facts other materials and tools have been used to have a more clear idea of each site which becomes even more crucial during the evaluation process. Satellite images provided by the open source Google Earth as well as the Tirana GIS online applications have been helpful to go back to the facts while evaluating by estimating the ur- ban potentials that the sites poses. Images from the site are documented and have been useful especially during the physical condition evaluation process.

Besides cited facts about both industrial sites, some in- vestigation tables have been produced which show a much more extended information than the above referred sources. The assessment process was focused on gen- eral and physical informations about the industrial sites so that it was possible to evaluate the sites compared to Albania size were built to settle for a long time on certain landscapes.

These industrial sites lost their importance and relevance even after the fall of iron curtain. These sites have shared the same destination during the first 20 years of the Albanian transition period. They were either demol- ished and replaced by other land-uses and building stock or were left in the civic shadow as the greyest parts of the city. Only a small amount of them could be reused for in- dustrial production and only some of them continue pro- ducing the same product.

Previous research work on Albanian Industrial Heri- tage - AHF

There are two Albanian Industrial Heritage sites that have been selected as the case studies for this research work. The selection process have been based on several criteria. The examples should be inside or adjacent to an urbanized area; should be anchored along an urban river and should be still remaining in its major portions. Both sites are dating early years of communist regime. In other words they are the pioneers of the similar, still remaining industrial heritage in Albania.

Graph. 1 Threatening situation of Industrial Buildings in Elbasan and Ti- rana

The first industrial site selected as a study area for this re- search work is an old Wood Plant site which dates from 1948- only three years after the Communist party have come into power. It is called a Plant since it is a huge area of 246,000 m2 including more than 27 buildings functioning to several types of wood production. Among many other functions it has been serving with the following factories: Fibers Factory, Imprenim Factory, Phywood Facto- ry, Likus Factory, Sawm Material Factory, Furniture Fac- tory, Plane Tile Factory, Veneer Factory, Seasoning Fac- tory, etc. (AHF, 2013)

The site is located in the southern part of Elbasan city- the fourth largest city of Albania along the northern bank of Shkumbini River. Furthermore, it is close enough to one of national routes which connects Elbasan city to a major part of the southern Albania. The site recently is highly fac- ing the developers’ pressure since it is settled on the most available lands for further urban expansion. The selected site in Elbasan is the site number 10033 ‘Uzina e drurit Niko Spiru’. It is indicated by the green square on the map of Elbasan in the figure 2.

The second site is an old Meat factory that is settled along Tirana River in the northern outskirts of the Albanian capital city. This is one of five industrial sites that share a vicinity with Tirana River. Moreover, the study includes some statistical assessments analyzing the industrial sites under certain criteria. Current Occupation, Physical Condition, Industry Type, Period of Construction, Property State, are some of those criteria. An example of those facts have been visualized in the follow- ing chart. In this chart it is shown the threatened situation of industrial sites in Elbasan and Tirana respectively (Paran- goni, 2012). It is visible that the threats are more evident in Tirana case. The reason for that is simply the high pressure of urban expansion happening in Tirana during the last 20 years.
Brainstorming by Facts

Besides cited facts about both industrial sites, some investigation/assessment tables have been produced which show a much more extended information than the above referred sources. The assessment process was focused on general, physical, social, economic, environmental properties of both sites. Apart from the main factual information, further descriptions and brainstorming perceptions have been provided in the details column of each table. These tables have served as the infrastructure for the evaluation process of this study.

General and Physical Properties

See Table 1 General and Physical information about the Wood Plant in Elbasan and the Meat Factory in Tirana [prepared by the author]

Social and Economic Properties

Among the other investigation themes, Social and Economic properties are the most difficult to assess. While it is not much difficult to brainstorm on General and Physical properties of each site.

The Social impact assessment of both sites are investigated under six sub-themes. They focus on urban memory, public awareness, public impact, social equity, accessibility, social interaction. It is worth to be mentioned the low public awareness in both cases. Besides, both of the sites possess a great potential for social interaction possibilities.

See Table 2 Social and Economic information about the Wood Plant in Elbasan and the Meat Factory in Tirana [prepared by the author]

Environmental Properties

See Table 3 Environmental properties assessment about the Wood Plant in Elbasan and the Meat Factory in Tirana [prepared by the author]

From Qualitative to Quantitative Evaluation

As part of the goals of this research study evaluation process is crucial. A multi criteria evaluation method have been used for evaluating the potential values of selected two industrial sites. The demonstration trial of that evaluation is shown in the table 4 for both sites.

This chart is an evaluation only about environmental properties of the sites. There have been defined 12 sub themes of evaluation [which can be extended further more]. Each of these sub themes is evaluated by scores ranging from 1 to 5 points. At the end of this trial on both examples separately, a total score per each of them is generated.

The evaluation work consists of correctly full filling the table of 12 sub-themes. The table consists of three columns to be completed. The first one is a general evaluation. The second one is the first evaluation transferred into numerical values. This is a Likert scale method evaluation process (Harry N. Boone, Jr. Deborah A. Boone, 2012). By this method there is possible to numerically compare both cases. Comparing the total scores may give a clue on comparative evaluation on these two examples. Although the total score is not much different, a more detailed check on each sub theme point shows there are differences. For example the orientation is evaluated higher in the Wood Plant since the site is placed in the northern bank of the river oriented toward the south. Similarly regarding the hard/soft scale ratio the Meat Factory is under-graded due to the high percentage of its hardscapes comparing with the soft one.

CONCLUSION AND FUTURE RESEARCH

Comparing two Albanian Industrial sites through a multi-criteria method is the main objective of this paper. Another important goal of this work is to raise the awareness of the Albanian scholars for their Industrial Heritage and the threats it is facing. The trial of a qualitative to quantitative evaluation method may be listed as a further aim of this study.

This study is still missing further crucial improvements. First of all the first trial of evaluation by environmental properties only have to be completed for other themes of Social and Economic properties as well. Secondly, integration of other professionals' answers to this evaluation process is crucial for achieving a more objective evaluation outcomes. And lastly, a more detailed and accurate data collection process should be implemented.
### Table 2: Social and Economic Information about the Wood Plant in Elbasan and the Meat Factory in Tirana [prepared by the author]

<table>
<thead>
<tr>
<th>Property</th>
<th>Wood Factory</th>
<th>Meat Factory</th>
</tr>
</thead>
<tbody>
<tr>
<td>Original function</td>
<td>Wood Factory</td>
<td>Cannery</td>
</tr>
<tr>
<td>Impact scale</td>
<td>1500</td>
<td>100</td>
</tr>
<tr>
<td>Original employment</td>
<td>1000</td>
<td>100</td>
</tr>
<tr>
<td>Actual employment</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

**Table 3: Environmental Properties Assessment about the Wood Plant in Elbasan and the Meat Factory in Tirana [prepared by the author]**

<table>
<thead>
<tr>
<th>Environmental Impact</th>
<th>Wood Plant</th>
<th>Meat Factory</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distance to the river</td>
<td>200 m</td>
<td>50 m</td>
</tr>
<tr>
<td>Contamination</td>
<td>Partially</td>
<td>Partly</td>
</tr>
<tr>
<td>River pollutant</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>River pollution</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Handoff shape index</td>
<td>0.9</td>
<td>0.9</td>
</tr>
<tr>
<td>Winter/spring</td>
<td>0.45</td>
<td>0.45</td>
</tr>
<tr>
<td>River pollution</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>River pollution</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>River pollution</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

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192 Table 2 Social and Economic Information about the Wood Plant in Elbasan and the Meat Factory in Tirana [prepared by the author]

193 Table 3 Environmental Properties Assessment about the Wood Plant in Elbasan and the Meat Factory in Tirana [prepared by the author]
Table 4 Environmental Evaluation of the industrial site of the Wood Plant in Elbasan and Meat Factory in Tirana [prepared by the author]

<table>
<thead>
<tr>
<th></th>
<th>ELBASAN Wood Plant</th>
<th>TRANA Meat Factory</th>
</tr>
</thead>
<tbody>
<tr>
<td>orientation</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>distance to the river</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>elevation from the river</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>contamination</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>river pollution</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>reurbanization lands</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>hard/soft scape ratio</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>erosion</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>infrastructure</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>connection with the context</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>relation with the river</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>topography</td>
<td>4</td>
<td>4</td>
</tr>
</tbody>
</table>

Acknowledgement

This paper is a product of an academic semester research work performed during a graduate course at Istanbul Technical University Department of Landscape Architecture. Thus I have to thank Dr. Ayım Turer Baskaya as the instructor of PEM 518 E course, Lands Restoration and Reclamation. Furthermore, I have to thank my colleagues at Epoka University, department of Architecture, for assisting with valuable advices and help during this study. Lastly I am thankful to three graduate students at Epoka University, respectively; Juxhina Spahiu, Reblika Celia and Rudina Kazazi, for focusing on the Meat Factory site during their final studio work and providing valuable data for this study.

References

The Vistula Riverfront in Warsaw, Poland: Nature and Public Needs

Małgorzata Okołowicz, Magdalena Budzyta, Marta Warmińska

Subject
Urban Riverfronts and their functions. Public perception and attitude to urban riverfronts.

Case study
Vistula Riverfronts in Warsaw, Poland.

Objectives
Establish dominant functions of urban riverfronts from the perspective of the history, culture, current needs and preferences of people: Why are Urban Riverfronts important for People? Analyses of the development of urban rivers in time: How did the functions of the Vistula River in Warsaw, Poland develop and what are the current dominant functions? Measure current uses and preferences towards urban riverfronts.

Methods
Literature review, case study: historical analysis, counting people, observations and behavioral mapping, questionnaires (on a group of 384 respondents).

Research Results
See Tab. 1, Fig. 2-7

Conclusions
1. Urban Riverfronts fulfill our needs for the contact with nature and water in cities.
2. The social and ecological functions of the Vistula River in Warsaw are currently dominant and will be consistently increasing.
3. Attention to the physical environment, economic and social needs of the community is needed for the successful riverfront development.
4. The challenge is in finding Warsaw’s own individual way of improving the riverfronts, based on the wealth of its history, culture and natural potentials.

Fig. 1. Location Maps of the Case Study: 3.5km stretch along both banks of the Vistula River in the city center of Warsaw, Poland. Observations from 150 site access points between Poniatowskiego and Gdański Bridges. 3 days of monitoring in June 2012: Sat-Sun: 10am to 6 pm, Friday: 12pm to 8 pm.

Fig. 2. Warsaw’s Panorama and the Vistula River (photo: Mark Wilson)

Fig. 3. Visual analysis of two distinct Vistula Riverfronts. Landscape Preference Matrix (after Kaplan, 1979)

Fig. 4. Warsaw Citizens’ preferences towards different types of riverfronts.

Human Goals | Making Sense | Involvement
--- | --- | ---
2D | COHERENCE: HIGH | COMPLEXITY: VERY LOW
3D | LEGIBILITY: VERY HIGH | MYSTERY: VERY LOW

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Tab. 1. Literature review on the positive effects of the water on people and preferences to urban rivers.