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## Urban diversity and the production of public space in Budapest

LAJOS BOROS<sup>1</sup>, SZABOLCS FABULA<sup>1</sup>, DÁNIEL HORVÁTH<sup>1</sup> and ZOLTÁN KOVÁCS<sup>2</sup>

### Abstract

Public spaces are spaces for representation of individuals, social groups, ideologies, values, cultures. At the same time, public spaces are commodified and “disneyfied” in capitalism, thus, the creation of a homogeneous, “desirable” spatial form and use of public space is often intended. Therefore, their production is characterised by constant rivalries and struggles and causes social conflicts. In addition, the production of public spaces in post-socialism has distinct development paths which is often characterised by contradicting traditions and objectives regarding the spatial form and the everyday practices taking place there. These contradictions create conflicts between various individuals, social groups, actors of urban policies etc. The aim of the paper is to investigate how urban social diversity is (re)presented in the public spaces of the 8<sup>th</sup> district of Budapest, Józsefváros. Which groups and values are more visible than others? How do local people use public spaces? The research is based on the content analysis of policy documents and interviews conducted with local residents of Józsefváros – one of the most diverse districts of Budapest. According to our results, the fragmented nature of the local society is reflected in the use of public space: diversity is present between the public spaces and not within them. Furthermore, some of the recent developments support the homogenisation of values and behaviours in public spaces.

**Keywords:** public space, social diversity, hyper-diversity, social cohesion, post-socialism, Budapest, Józsefváros

### Introduction

Due to the effects of globalisation and intensifying migration contemporary cities tend to become increasingly diverse in terms of ethnicity, culture, lifestyles, identities, values, ideologies and attitudes. The different dimensions of diversity intersect in multiple ways within and between groups (TASAN-KOK, T. *et al.* 2014). These processes create complex and dynamic urban societies with changing dividing lines and interactions.

Because of their complexity the everyday realities of these diverse societies is difficult to analyse. Neighbourhoods are often perceived and analysed as residential places

with special attention to segregation, social bonds and life chances. However, a growing body of literature suggests that neighbourhoods and place of residence should not be the only analytical units when researching social relations (VAN KEMPEN, R. and WISSINK, B. 2014). There is strong empirical evidence that diverse neighbourhoods do not mean necessarily that there are diverse social networks among residents (ATKINSON, R. and KINTREA, K. 2000; VAN BECKHOVEN, E. and VAN KEMPEN, R. 2003; LEES, L. 2008; BLOKLAND, T. and VAN EIJK, G. 2010; WISSINK, B. and HAZELZET, A. 2012).

Other places, such as workplace, sites of consumption, schools, public spaces can be

<sup>1</sup> Department of Economic and Social Geography, Faculty of Science and Informatics, University of Szeged. H-6701 Szeged, PO. Box 650. E-mail: borosl@geo.u-szeged.hu

<sup>2</sup> Geographical Institute, Research Centre for Astronomy and Earth Sciences, Hungary Academy of Sciences, H-1112 Budapest, Budaörsi út 45; Department of Economic and Social Geography, Faculty of Science and Informatics, University of Szeged. H-6701 Szeged, PO. Box 650. E-mail: zkovacs@iif.hu

equally important for establishing contacts, because of proximity, similarity of interests, frequency of encounters etc. (PETERS, K and DE HAAN, H. 2011; VAN KEMPEN, R. and WISSINK, B. 2014). These places can be both located in and outside of the neighbourhood, shaping the spatial activities of local residents. Therefore, social interactions, relations, bonds are significantly influenced by the places (and the flows between them) where residents spend their time: spaces of work, family life and free time. These activities are not fixed in space, instead they are characterised by mobility within uneven networks (SHELLER, M. and URRY, J. 2006; URRY, J. 2007). Thus, to understand the relations in a diverse society we have to analyse the action spaces of people: where they work, live, spend their free time etc. Public spaces are among the most important elements of activity spaces where multiple activities and encounters take place.

The aim of this paper is to analyse the use of public spaces in a highly diverse neighbourhood of Budapest, called Józsefváros. Our primary research questions are as follows: How diversity is (re)presented in those spaces? Who use the public spaces in Józsefváros and for what purposes? What kinds of conflicts emerge regarding the use of public space?

### Research methodology

This research was carried out in Józsefváros which is one of the 23 independent district municipalities of Budapest (Figure 1). The district can be further subdivided into 11 quarters based on their history, built environment or social milieu (Figure 2). Among them the Magdolna and Orczy Quarters are the most deprived areas.

Despite its relatively small territory (6.85 km<sup>2</sup>), the district is socially and culturally one of the most diverse areas of the city. The population of Józsefváros is 76,250 (2011) among them the proportion of non-Hungarian ethnic groups is 11.9 per cent – which is rela-

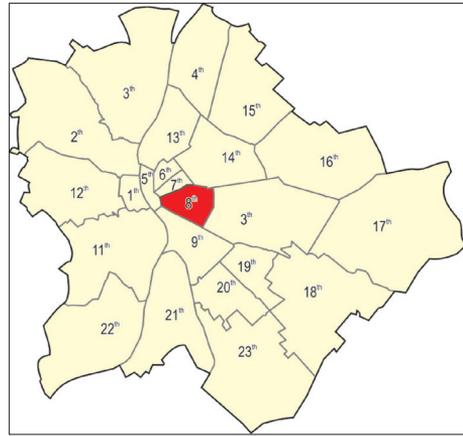


Fig. 1. Location of the case study area within Budapest. Source: edited by the authors

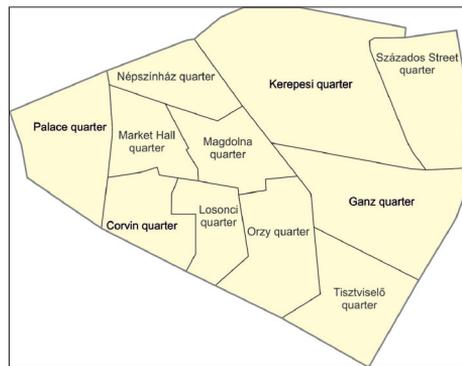


Fig. 2. The quarters within Józsefváros. Source: edited by the authors

tively high by Hungarian comparison. The Gypsy/Roma is the largest ethnic minority group and in some parts of the district they comprise around 50 per cent of the local inhabitants. There are significant South Eastern Asian and African communities in Józsefváros as this is a popular destination for international migrants [1]. Furthermore, Józsefváros has a ‘springboard’ function within Budapest: it offers affordable housing for those who move to the city. Thus, the local population is ever-changing due to the influx of new residents from both Hungary and abroad. There is also a large number of homeless people and poor households in the

area. The negative image of Józsefváros is slowly changing as a result of ongoing urban regeneration programmes, gentrification and 'studentification'. Therefore, the area is very diverse with regards social status, ethnic and cultural identity, strength and forms of place attachment, lifestyles etc. The various aspects (social, architectural, cultural etc.) of diversity of the district is considered as an asset in the local development documents.

This paper is mainly based on in-depth interviews conducted with residents of the district. Altogether 50 interviews were held between September 2014 and March 2015 as the part of the Divercities project, financed by the 7<sup>th</sup> Framework Programme of the EU. The questions focused on the life of the respondents; their career, experiences, their social relations, everyday activities and their relation to Józsefváros. The interview partners were chosen with a snowballing method with the help of key informants (e.g. locals living in the district for decades, representatives of homeowners' associations or civil organisations) from the area. The participation in the research was voluntary. We intended to reflect the diverse nature of the local society in the sample, and to include interviewees with different age, residential, ethnic, cultural, occupational background. Data on ethnic background are based on the self-identification of the respondents. According to these figures the sample is comprised predominantly by ethnic Hungarians; approximately one-fourth of the interviewees (13) reported on at least one ethnicity other than Hungarian. Regarding their country of origin, 8 were foreign born; they are mainly from the neighbouring countries, namely Slovakia and Romania.

In addition to the interviews, local and national policy documents were also analysed to identify the most important aims related to the development of public spaces. These documents were collected from the publicly available sources, mainly from the homepages of related institutions. No sampling was applied in this case – all available documents were analysed.

## Diversity and public space

Several concepts have been used so far to grasp the complexity of urban societies: multiculturalism, inter-culturalism, diversity, super-diversity etc. One of the key concepts of this study is hyper-diversity (TASAN-KOK, T. et al. 2014) which refers to the increasing diversification of population in various terms: ethnicity, socio-economic status, lifestyles, opportunities and activities. With this broad conceptualisation, hyper-diversity aims to move beyond the previous approaches which often tend to focus on ethnicity or nationality. Traditional approaches assumed that a person's position within the society is directly influenced by his/her ethnic or cultural background, and other socio-economic aspects attached to it. But nowadays there is a growing status discrepancy, and different members of the same family can have very different status within the society. People belonging to the same social or ethnic group may have quite different attitudes with respect to school, work, parents and towards other groups. They may have also very different daily and life routines, activity spaces. There are no clear and simple dividing lines: various interactions can emerge between the dimensions of diversity

Hyper-diversity is a result of the intensifying international migration, the diversification of countries of origin (VERTOVEC, S. 2007), increasing population mobility within countries and cities (SYRETT, S. and SEPULVEDA, L. 2011), new political processes and structures, changing identities (CASTELLS, M. 2009; CANTLE, T. 2012), the neoliberal deregulation processes, the increased connectivity of global cities (DUDÁS, G. and PERNYÉSZ, P. 2011), the intensifying information flows between various groups and places and several other factors.

The concept of hyper-diversity also emphasises the possibilities related to the diverse nature of society: it can contribute to social cohesion and social mobility through the acceptance of otherness and different forms of mutual help and support. In addition, diversity can also enhance economic performance

according to the concept because of the available social capital, the increased chances of networking, increased productivity and competitive advantages (NATHAN, M. 2006; ERAYDIN, A. *et al.* 2010; SYRETT, S. and SEPULVEDA, L. 2011; TASAN-KOK, T. *et al.* 2014).

As it was mentioned above, activity spaces have a special significance in the integration of hyper-diverse societies, thus, public spaces are essential to realise the potentials related to diverse urban societies. The definitions of public space often focus on ownership and accessibility, claiming that public spaces are commonly owned, accessible spaces (VEDRÉDI, K. 2014). But due to the recent privatisation of public spaces there is no clear divide between publicly and privately owned spaces anymore. Furthermore, probably no public space was accessible equally to everyone in the history – there were always formal and informal restrictions, rules regarding the use of streets, squares, parks etc. Therefore, public space is an ideal type of space which has never been fully achieved (MITCHELL, D. 1995; HARVEY, D. 2005).

Other approaches focus on the functions and ownership of public spaces instead. However, focusing on ownership can also be misleading, since privately owned places can also function as public spaces – see the examples of malls, stadiums, beaches etc. Therefore, the definition of public spaces should focus rather on their role in the society; hence they are places of social interaction, and spaces of and for representations. Public spaces are ‘where the social and cultural rules governing public behaviour predominate’ (MITCHELL, D. and STAHLI, A. 2009, 511). These spaces include streets, squares, malls, parks, sidewalks, cafes, playgrounds etc. Several studies (e.g. MITCHELL, D. 1995, 2003; SENNETT, R. 2002) connect public space with the idea of public sphere, developed by HABERMAS, J. (1989). According to these approaches, public space is the place of free communication, gathering or interaction, therefore, it is a necessary prerequisite of democracy (CALHOUN, C. 1992; MITCHELL, D. 1995, 2003; NIELSEN, S. 2013). But according to

SENNETT, R. (2002) public space is constantly eroded by private interests, thus, the democratic character of society is jeopardised.

In addition to their political significance, public spaces or places of consumption create the sense of belonging and comfort – even without direct social contact, through the casual encounters with familiar faces and environments (GOFFMAN, E. 1959; CURLEY, A.M. 2010; BLOKLAND, T. and NAST, J. 2014). Encountering with foreigners can contribute to the growth of tolerance and acceptance in society. Participation in these so called ‘third places’ (places outside home and work) provide vital elements of social existence through enabling and liberating experiences (OLDENBURG, R. and BRISSETT, D. 1982, HICKMAN, P. 2010). Public spaces are the ones, where the diverse character of neighbourhoods becomes visible: people experience it and have to deal with it.

The contacts in public spaces between people with different backgrounds can range from the visual interaction to friendly conversation and communal activities. With these experiences, the social production of public spaces in diverse urban societies is an important element of social cohesion – they can generate awareness and acceptance of otherness and multiculturalism (FORREST, R. and KEARNS, A. 2001; PETERS, K. and DE HAAN, H. 2011; BOSCHMAN, S. 2012; WIESEMANN, L. 2012). In this regard, the quality of public spaces is crucial: safe, comfortable, welcoming places with many facilities are more attractive for different groups of the residents (MYERSON, D.L. 2001; PUTNAM, R. 2007; PETERS, K. and DE HAAN, H. 2011).

At the same time, encountering with diversity in public spaces can also have negative consequences on social cohesion. The different kinds of activities in public spaces can be conflicting with each other, thus, creating divisive forms of identities and lead to intolerance, alienation and isolation (DELANTY, G. 2012; SCHMID, K. *et al.* 2014).

Public spaces are socially produced spaces and conflicted spaces where various values, ideologies and interests are constantly

(re)negotiated according to the changing power relations in society. Their functions, physical forms, shared meanings and uses can be very different (LEFEBVRE, H. 1991; ZUKIN, S. 1995; MITCHELL, D. 2003; ERŐSS, Á. et al. 2009; ERŐSS, Á. 2011; BODNÁR, J. 2015). Furthermore, public spaces are increasingly commodified and homogenised in modern capitalist societies (ZUKIN, S. 1991, 1995, 1998). Deviant behaviour and marginal groups (e.g. drug addicts, homeless people etc.) are often excluded through formal and informal restrictions (BELINA, B. 2007; UDVARHELYI, É.T. 2014). These actions perceived as a threat to the public and democratic nature of public space (MITCHELL, D. and STAEHLI, A. 2009).

The recognition of hyper-diversity forces us to look differently at the possibilities of living together in a city or a neighbourhood. Mixing groups within a neighbourhood – for example, in terms of income or ethnic descent – may lead to physical proximity of these groups, but because they have different lifestyles, attitudes and activities, these people may actually never meet or never do anything together. Therefore, to gain deeper knowledge on the extent and strength of social networks of the residents of Józsefváros, it is important to analyse the types of activities and interactions of local people and the places where they are performed.

### Public spaces in Józsefváros

Józsefváros has a great variety of public spaces. Green areas are located mainly in the outer parts of the area, while the inner part has a relatively dense street network with smaller squares and parks. The skeleton of the road system was laid down in the second half of the 19<sup>th</sup> century. Markets have always been important for the local social and economic life and they were often associated with minorities: Jews, Roma people or more recently the Chinese. The traditional market at Teleki Square was established at the end of 19<sup>th</sup> century and recently went through an extensive redevelopment to maintain and even expand

its social and economic functions (focusing on middle-class consumption) (*Photo 1, 2*). The Four Tigers Market, functioning between 1993 and 2014 was the most important hub of Chinese traders in Budapest, and it had also a social function providing affordable goods for the less affluent people. The market was recently closed because of the illegal trade and the tax evasion of the traders.

Józsefváros – as well as the whole inner-city of Budapest – suffered from disinvestment in the decades of communism (KOVÁCS, Z. 1998). This had an effect on public spaces as well: the conditions of local squares, parks and markets deteriorated. In the new millennium several urban regeneration programmes were initiated in central Budapest by the local government and investors (SZEMZŐ, H. and TOSICS, I. 2005; TOSICS, I. 2005, 2006; KOVÁCS, Z. 2006, 2009; LADÁNYI, J. 2014). These programmes aimed at improving the quality of life of the locals and to attract young professionals, tourists, students and also foreigners (CZIRFUSZ, M. et al. 2015). The transformation of old and creation of new public spaces played an important role in these programmes. In the case-study area the most important project was the so-called Corvin Promenade, a market-led large-scale urban rehabilitation project with new apartment buildings, a shopping mall and new public spaces. This project was the latest modification to the historically evolved street pattern. Social rehabilitation also took place in the district with the renewal of several parks and squares – the most prominent among them was the Magdolna Quarter, which is one of the most deprived parts of Józsefváros. At the same time, the so-called Downtown of Europe Programme aimed at upgrading the inner parts of the district in the Palota Quarter, in order to reposition the area in tourism [1, 2].

With the physical upgrading of public spaces new practices of spatial regulations were also introduced on national, city and district level. The aim was to keep public spaces secure and to protect the spaces of consumption. The consecutive versions of



*Photo 1. The Teleki Square before renewal (Photo by NYÁRI, Gy.)*



*Photo 2. The renewed market at Teleki Square (Photo by NYÁRI, Gy.)*

the Integrated Urban Development Strategies (2008, 2012, 2015) of Józsefváros all targeted to create safe and clean public spaces, to handle the problems related to begging and homelessness, to create quality places for leisure and to expand green areas [2, 3, 4]. But there were several anti-homeless and anti-beggar elements of the measurements taken as well – especially in the local legislation (UDVARHELYI, É.T. 2014). In 2010 with the amendments of the Act on Built Environment [5] and the Act on Spatial Development and Planning [6] it became a misdemeanour to use the streets and squares ‘improperly’ – i.e. begging or sleeping there. The amendment of the Act on Misdemeanours [7] in 2012 provided possibility for municipalities to introduce statutory provisions against homeless people and beggars. In 2012 the Hungarian government made possible for local governments in the fourth amendment of Fundamental Law (the Hungarian Constitution) to forbid living in the streets, underpasses and other public

spaces [8]. The aim of these regulations was to create safe, aesthetic urban spaces with the removal of disturbing behaviour.

On the district level, new rules were also introduced to protect the renovated playgrounds and parks; these defined the time periods of use as well as the appropriate behaviour (e.g. no eating in playgrounds, no sleeping or alcohol consumption in parks etc.) in these places (Photo 3). The renewed parks and playgrounds are often fenced to keep away the unwanted users. In some cases, security guards were also hired to enforce the regulations. The local government of Józsefváros also banned eating the food waste from the trash cans in 2010 because ‘it is unhealthy and dangerous’ [9]. The local government also initiated a referendum in 2011 on begging and homelessness, trying to enforce the previously accepted anti-poor regulations. However, the referendum became unsuccessful, since the voter turnout did not reach the necessary threshold.



Photo 3. Park regulations at the renewed Teleki Square (Photo by Boros, L.)

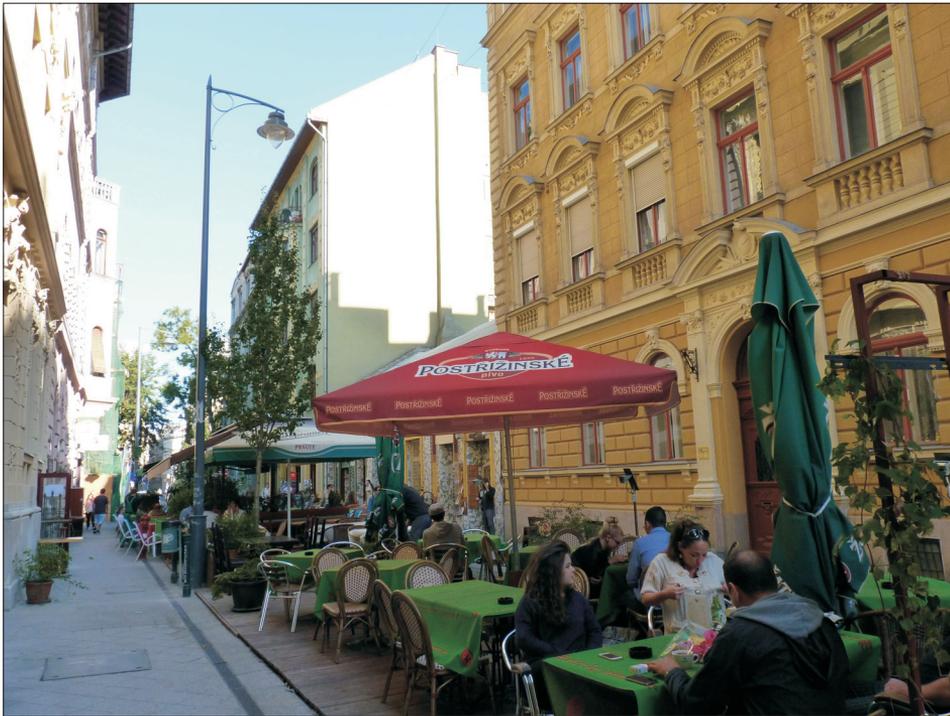
As a bottom-up initiative, community gardening also appeared in the district, using the vacant plots in Józsefváros – the most prominent example being the Leonardo Community Garden. The general objective of Leonardo is to establish and stimulate bottom-up initiatives through community building and to enhance social cohesion. The social background of tenants is very diverse; people with different occupational backgrounds, age, educational level work in the garden. The diversity of participants can be noticed not only in socio-economic, cultural and ethnic terms but also regarding their lifestyle (e.g. residency, gardening experiences and civil leadership). However, the limited availability of plots, the bureaucratic decision-making system and inadequate regulation pose serious challenges to community gardens (BENDE, Cs. and NAGY, Gy. 2015). Due to the ongoing gentrification processes, several quasi-public spaces (bars, restaurants etc.) also appeared in the area

as the spaces of consumption, especially in Palota Quarter and Corvin Quarter (*Photo 4*).

To sum up, the social production of public spaces has changed significantly in our case-study area. Both the market and the political forces fostered these changes in order to create more liveable and consumable public spaces. On the one hand, it resulted in the creation of aesthetic public spaces, while on the other, the struggle over the production of public space became also intensified after 2000.

### **The use of public spaces in Józsefváros: empirical findings**

In this section we present the results of the interviews. What kinds of activities are characteristic for local people, and what kinds of public spaces they use? What kinds of conflicts emerge regarding the use of public spaces and how they perceive the new de-



*Photo 4.* Cafes in the Palota Quarter (Photo by Boros, L.)

velopments and regulations? We also investigate the free time activities of the residents; what do they do, and with whom do they spend their free time?

According to the respondents' stage in the family life-cycle and their socio-cultural background, four major groups of residents could be identified with distinct variations in daily routine and free-time activities: (1) young singles (below 35); (2) families with children; (3) middle-aged and older people (over 50); (4) migrants and minorities. Within this latter group, three subgroups could be defined: (a) ethnic Hungarians born in the neighbouring states (i.e. Slovakia, Romania) who moved to Hungary after 1990; (b) Roma people being either residents of Budapest already before 1990, or moving to the city after the political changes, (c) international migrants who moved to Hungary/Budapest after 1990 (e.g. Arabs and Chinese).

Among *young singles* new, flexible forms of work are typical: They are often freelancers or employed in flexible working hours, or telework. Hence the actual place of work is either at home or at shifting locations in Budapest or even beyond (businessmen, agents etc.). Their daily routine is closely linked with other parts of the city, however, their local activity space within Józsefváros is very narrow and it concentrates only to the house, and the surrounding blocks or streets. As the following quote shows, they mix with local people very rarely:

*“Public spaces are occupied by drug addicts and homeless people, which do not make the neighbourhood attractive for a stroll”* (R30, male, 25 years, private entrepreneur: agent of financial products, Hungarian).

The daily activity space of people living in *families with children* is determined by the triangle of home, workplace and institutions of children (kindergarten, school, sport-fields, music school etc.). Their daily activity space is more related to Józsefváros or even to the neighbourhood than in the previous case. Families living in Palotanegyed often take their children to kindergartens or schools in the neighbouring 5<sup>th</sup> district, where the

number of children is much less, and Roma residents are completely missing.

The daily routine is most attached to Józsefváros and the neighbourhood among *older people*. They use services (health, retail etc.) nearly exclusively in Józsefváros, and typically in the close surroundings. They have also more Church related activities, they spend more time with friends and visit cultural events also more regularly.

The daily routine of people who belong to the group of *migrants and minorities* is also more strongly linked to certain parts of Józsefváros, most typically the area near the place of residence. They are less skilled, more often unemployed (especially the Roma) or employed by the district for temporary public works. Their daily routine or free time activity is also different from the other three groups because of cultural factors and traditions. For example, in the Roma society women traditionally do not look for permanent job, they are expected to look after the children and the husband, therefore, they often stay at home.

*„How should I say? This is different in each Roma family. There are traditions and habits. Some husbands let the wife going out with girl-friend to shop or have a chat. Others say no, you must stay at home, you don't meet others in the town. There are jealous husbands, unfortunately, you know what I mean?”* (R44, female, 40 years, public worker, Hungarian-Roma).

The daily routine of individuals is determined most significantly by age, household structure and other socio-economic characteristics (e.g. education, occupation, income). The neighbourhood, its functional (e.g. location of shops, schools) and physical patterns (e.g. green areas), or ethnic characteristics also play a role, though subordinated to the first group of factors.

The four major groups described above have substantial differences regarding their free time activities, too. *Older people* living in Józsefváros for a long time tend to spend their free time in a narrow geographical area, close to their home (e.g. senior club, market, Church). They built up also the widest net-

work of friends in the neighbourhood, and most of them maintain strong relations with their neighbours at the house/block level.

The majority of *young singles* are newcomers in the district. They use public spaces, cultural or leisure institutions of Józsefváros for free time activities relatively rarely. The reasons behind are basically twofold. Firstly, this group has generally a lack of free time. Secondly, as they arrived to Józsefváros more recently, their family, friendly as well as working relations link them to neighbourhoods outside the district. Their typical free time and leisure activity is visiting cafes and 'ruin bars' in the inner-city and most notable in neighbouring Erzsébetváros (7<sup>th</sup> district). Regarding leisure opportunities several respondents mentioned that Józsefváros has changed a lot for the last decade, partly due to the ongoing regeneration activities. There are a lot more attractive places (cafes, bars, clubs etc.) in the district that provide alternatives for young people than before. The growing diversity of free time opportunities was perceived positively by respondents. They also noted that tourists and foreigners living in Budapest permanently are overrepresented in these fashionable places.

The free time activities of people living in *families with children* are very much determined by the need of their children. Parents adjust their free time schedule to the activities of their children let it be sport, entertainment or hobby. For free time activities, in addition to local parks and squares residents often use public spaces outside the district e.g. in neighbouring Ferencváros (Danube bank), in the 5<sup>th</sup> district or on the other side of the Danube, Gellért Hill in 11<sup>th</sup> district.

*"We often go to Károlyi Garden, partly because everybody from the kindergarten of my kids go there. They live nearby, so for them it is easy. We go there because we always find a mate from the kindergarten, or a couple of acquaintances whom we know, and it is easy to play together... We go to other playgrounds in the surrounding as well, and even to the 9<sup>th</sup> district, like... Markuszovszky Square what we call 'cat square'"* (R18, female, 36 years, real estate agent, Hungarian).

On the basis of the interviews we can conclude that most of the residents seek free time opportunities also outside the district. The reasons are manifold, e.g. local public spaces often attract people with antisocial behaviour (drug addicts, homeless etc.). The available public spaces and parks often lack conveniences and they are not very much attractive for families with children, or elderly. Segregation plays also a role here, as public spaces in the centre of the district are used mostly by young Roma people, who are noisy and gather in bigger groups, therefore, non-Roma people living in the neighbourhood tend to go to other public spaces, sometimes outside the district limits.

Public spaces were often mentioned in the interviews because of recent local policies aimed at improving security and quality of public spaces. Public spaces were also often mentioned among the positive (e.g. new developments, improving security) or negative (e.g. homeless people, drug users) aspects of the neighbourhood as well. One of the interviewees also highlighted the possible positive effects of renewals on social cohesion:

*"... the renovation of square has important role in the cohesion of community. It gives a good feeling to people, because it is important that our children can grow up in a nicer environment."* (R21, female, 63 years, old-age pensioner, Hungarian)

According to the interviews there is no particular focal point (i.e. a particularly important) of public spaces in the district, every neighbourhood has its most important place where people gather and interact. At the same time, some of the main roads were mentioned as borders of certain neighbourhoods or the district itself – for example the Grand Boulevard, which is one of the main traffic lines in Budapest. Public spaces that were most often mentioned by respondents can be grouped into the following types: playgrounds, streets, squares, parks, and markets. Shopping malls were mentioned actually fewer than expected – although one of the latest extensive shopping mall developments in Budapest, the so-called Corvin

Plaza (Photo 5) is located in the central part of Józsefváros. According to the interviews it is considered more of a place of consumption than a place of gathering, recreation and free time. On the other hand, the traditional market on Teleki Square was more often mentioned as a place with not just shopping opportunities but significant social life as well.

*“The market on Teleki Square was renovated nicely very recently. Before that I did not go there at all. Instead I went to other markets further from my home because Teleki Square was a complete mess. Now it is really a good place with a fantastic atmosphere. There are shops, coffee houses and sometimes complete bands playing music while people are eating, chatting, shopping”* (R48, female, 28 years, student/trainee lawyer, Hungarian).

Based on the interviews playgrounds and parks (Orczy Garden being the most often cited example for the latter) seem to be the most often used and most preferred public spaces in Józsefváros.

In many cases public space is used only for access to work from home. In these cases,

they are sites of flows, and not intense interactions. If there are interactions in public spaces it is more probable that they develop between people at similar stages of life cycle (e.g. parents with children, pensioners) or with similar lifestyle (e.g. joggers, skaters, dog owners).

*“I would not say that I use them regularly. Of course there were cases when I sat on one of the banks on Rákóczi Square, but I do not have a pet or something. But there are public spaces which are nice and it is a good feeling to go through them”* (R3, female, 23 years, student, Hungarian).

The stage in life-cycle or the lifestyle of interviewees have direct influence on the use of public space, activities taking place there, and the level of satisfaction with available public spaces. For example, younger interviewees with children tend to be less satisfied with the quality and quantity of public spaces.

*“The most common problem is the lack of clean places and green areas. (...) There are not enough playgrounds: in Palota Quarter there is only one, in Gutenberg Square”*



Photo 5. The Corvin Plaza, one of the largest shopping malls in Józsefváros (Photo by BOROS, L.)

(R15, male, 37 years, joint representative of condominiums, Hungarian).

There are three types of conflicts related to public spaces: (1) the issue of who are entitled (or expected) to use them (exclusionary behaviours and policies); (2) conflicts between different users and their activities; and (3) a gap between the needs and the quality and/or 'quantity' of available public spaces.

Conflicts regarding the use of public spaces were most often mentioned in the case of renewed playgrounds, parks and squares and they were related to homeless people, or – rarely – people from other neighbourhoods. Recently renewed playgrounds are often fenced and guarded to control access and in particular to keep homeless people away:

*"There are guards at the renewed playground at Mátyás Square and Kálvária Square as well. I think the reason for this is to keep away drug addicts, homeless people and to prevent vandalism over night"* (R28, female, 37 years, community organiser at an NGO, Hungarian-Jewish-Polish).

The situation of public safety, especially drug abuse and the interventions against homeless people, were the most relevant topics for our interviewees. Regardless political orientation respondents seemed to support unequivocally the efforts of the district municipality to create 'order' in the district applying policy measures (e.g. CCTV system controlling public areas, strict local regulation about anti-social behaviour in public spaces). At the same time, judgements on the recently installed CCTV systems were rather contradictory. On the one hand, some people liked it, because they felt it strengthens security in the district:

*"Well, the cameras are good things, since we all know that the population of the district is mainly Roma people and we all know the situation in Józsefváros"* (R33, male, 37 years, musician, Hungarian-Roma).

On the other hand, some of the interviewees felt that the use of public space became too controlled, thus, they avoid certain places despite the renewal:

*"...there are these guarded super parks where I do not like to sit because it is not possible to have a beer or to do other kinds of stuff"* (R32, male, 34 years, museologist/webpage designer, Hungarian).

The second type of conflicts often evolves related to dog walking and other uses of public spaces. Different lifestyle groups (e.g. joggers, dog owners, families with children etc.) would like to use the same space for different – and often conflicting – activities. Regulations are set where and when it is possible to walk dogs, but as some of the dog owners neglect the rules they disturb other users and cause problems:

*"... this Köztársaság Square, and when I moved here I tried to jogging around the square. I was able to do so about three times then I gave up when a pet dog attacked me and grabbed my pants. And its owner did not react at all"* (R50, female, 35 years, researcher, Hungarian).

The gap between the needs of users and the quality of services manifested mostly in the lack of green spaces in the inner, very densely built part of Józsefváros.

*"Now, that Köztársaság Square is renewed we often sit there in the summer (...) a lot of youngsters visit this square and there is no public toilet. They renewed it spending more than a billion HUF and there is no toilet"* (R3, male, 23 years, student, Hungarian).

The cleanliness and safe use of public spaces seems to be particularly important for the interviewees and it was mentioned in almost every interview, regardless of the age, gender or social status of interviewees. It highlights the importance of clean and attractive public spaces in creation of appropriate spaces for leisure and social interaction. It is important to highlight that the above mentioned conflicts usually do not result in a political action, the individuals concerned just expressed their dissatisfaction in the interviews.

## Discussion and conclusions

The hyper-diversity of Józsefváros is manifested in the everyday activities of local residents since a lot of factors have an influence

on what and where people do – however, ethnicity still has the most significant role. Prejudice towards Roma influences the activities and the use of public space greatly since several interviewees indicated that they tried to avoid those places where Roma people go. At the same time age, family status, lifestyle and place of residence are also important factors. For example, having children, owning dog or jogging increase the use of public space and the chance of interaction with other residents. As the interviews reflected the most important and most frequently used public spaces in Józsefváros are squares, markets, parks and playgrounds. Although diversity of the district is manifested in the spatial form and use of public spaces, this diversity can be seen among different places rather than within them. The manifestation of diversity can be limited within the public spaces due to local and national regulations which control the time of use and the acceptable behaviour. However, the interviewed residents usually do not oppose these measurements – in some cases they even support them. These measures often have homogenising effect on the public spaces and they exclude or discriminate certain social groups.

Security issues were mentioned in several interviews as motivations for using or not using certain public spaces. Vicinity also has a key role in the use of public spaces: people usually use places which are close to their homes. This works against the mixing of different groups in public spaces. Thus, public spaces of Józsefváros do not function as ‘third places’ (OLDENBURG, R. and BRISSETT, D. 1982) for some groups (especially for elderly people); they do not participate in activities outside their home or work. According to the interview partners, public spaces are the spaces for movement and places for leisure, recreation – these were the most emphasised functions.

The democratic role of public space was not mentioned by our respondents, probably because the traditional spaces of political protests are located near to the national political institutions and national monuments

which are situated outside of the district. No interview partner mentioned directly the renaming of some public spaces which has happened after the 2010 elections, but both the old and new names were used by the respondents. For example, the Pope John Paul II square was sometimes mentioned with its previous name: Republic (Köztársaság) Square. Some interviewees used a shorter form of the name, calling it Pope Square (Pápa tér) – but only for practical reasons, without any political connotation.

A division between local users and tourists, visitors from other parts of Budapest was clearly visible in the most fashionable spaces and also in shopping malls. Local residents barely mentioned shopping malls when they described their daily activities and the use of public space.

As our interviews showed, the fragmented nature of local society is reflected in the use of public spaces as well. Related to public space, diversity and multiculturalism have been mentioned mainly in relation to unusual (comparing to the norms of the ethnic Hungarian majority), ‘strange’ behaviour of people from various social groups (e.g. the Roma, immigrants). In order to exploit the possibilities of hyper-diversity, the chances of interaction within public spaces should be increased in the future.

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## On the edge of new public spaces – city-centre renewal and exclusion in Kaposvár, Hungary

VIKTOR ERNŐ JÁMBOR<sup>1</sup> and KATALIN VEDRÉDI<sup>1</sup>

### Abstract

In this paper we intend to analyse the effects of European and Hungarian urban policies with special attention to the consequences of neoliberalisation on marginalised groups. In the first part we demonstrate how neoliberalisation evolved in Hungarian policies. Next we analyse the revanchist turn of urban rehabilitation programmes, then we demonstrate the strengthening exclusion mechanisms of the rehabilitation projects through a case study in Kaposvár (Hungary) where anti-homeless regulations changed the survival strategies of marginalised people. With this research we intended to answer two questions. Firstly, how the class relation reproduction projects and processes of the neoliberal urban policies appeared in the Hungarian policies? And, secondly, how the processes that can be linked with inner-city regeneration can be interpreted in the light of the use of public spaces and the survival strategies of homeless? We illustrate the above mentioned local changes and the discourse of exclusion (as Hungarian manifestation of revanchist urbanism) through a case study. The research is based on narrative and life-path interviews with homeless of Kaposvár, and with experts, as well as members of the local political and cultural elite. Furthermore, we made participant observations to observe the consequences of the aspirations of local political elite.

**Keywords:** neoliberalism, displacement, revanchist urban policy, anti-homeless law, post-socialist city, Hungary

### Introduction

Neoliberalism – the dominant political theory of the late modern societies – is present in many socio-economic decisions of the contemporary world at all geographical scales (LEITNER, H. 1990; MITCHELL, D. and HEYNEN, N. 2007). The neoliberal transformation of European urban policy has also become part of this globally prevailing process since the beginning of the 1990s. Neoliberal political principles – focusing on individual freedom and on the role of market mechanism in forming social processes – have become prevalent in East Central Europe (ECE) in the late 1980s and early 1990s as part of the post-socialist transition (BOCKMANN, J. and EYAL, G. 2002). According to neoliberal principles that became dominant in the USA and

UK in the early 1980s the age of welfare state expired and was replaced by a state that ensures the enforcement of market mechanisms and focuses on individual interests and responsibility. The declared goal of the national and local economic and political elites is to improve the competitiveness of cities in the global flows (WACQUANT, L. 2012), even if subordinating existing social problems to this goal (SWYNGEDOUW, E. *et al.* 2002; RACO, M. 2014). In this political-institutional context welfare is provided only for those who are able to raise its terms for themselves (workfarist state) WACQUANT, L. 2009, 2014). Those who cannot do this are forced to the edge of urban societies without hardly any relevant responses that would at least partly solve their problems (e.g. unemployment, poverty, homelessness).

<sup>1</sup> University of Szeged, Department of Economic and Social Geography, H-6722 Szeged, Egyetem u. 2.  
E-mail: jambor.viktor@gmail.com, E-mail: vedredikata@gmail.com

Critical scholars put the “workfare state” in the very centre of their critique on neoliberalism recently. They consider the neoliberal state as a driver of uneven development (SMITH, N. 2008), and this role manifests in prioritising capital accumulation in policy-making – such as employing urban development schemes to stimulate investments in the local economy. They pointed out that neoliberalism has created new forms of socio-spatial inequalities, consequently, space is increasingly divided among urban residents according to class (e.g. gender, race, sexual orientation and access to housing) (DAVIS, M. 1992; DAVIS, M. 2006; WACQUANT, L. 2007; BELINA, B. 2011; BERNT, M. and COLINI, L. 2013; KUEHN, M. and BERNT, M. 2013; IVANICS Zs. 2013; NAGY, E. *et al.* 2015).

In this paper we analyse the effects of neoliberalisation on Hungarian urban policies focusing on the marginalised groups of the local society with special attention on the effects of urban renewal programmes and the concomitant social exclusion. We intend to answer two questions. Firstly, how neoliberal urban policies appeared in the Hungarian context? Secondly, how the processes generated by these policies can be interpreted in the light of the use of public spaces and the changing survival strategies of homeless people? We illustrate the role of local changes and the discourse of exclusion (as Hungarian manifestation of revanchist urbanism) through a case study carried out in a Hungarian medium sized town: Kaposvár. We analyse the efforts of the local political and economic elite to increase the competitiveness of the city through the regeneration of the historical inner-city, and the effects of this on the most vulnerable members of the society. We provide an overview about the local systematic – revanchist – policy-making processes which made significant part of the city-centre forbidden zone for the homeless. We analyse the aspirations of the local elite and the changing strategies of the homeless to criminalisation and penalty policies with using participatory observations, life-path and expert interviews (WACQUANT, L. 1996, 1999a,b, 2001, 2008a,b, 2014).

## Research methodology

As the subject of public spaces is complex and often generates dilemmas and debates among experts the selection of right methodology was crucial. In order to get a deeper understanding of the place qualitative methods were used. By using qualitative methods it was possible to understand the processes in a deeper way. It is more flexible than quantitative methods as the research plan and the research process can be modified in accordance with the results (BABBIE, E. 2001; STEINAR, K. 2005), so it can be adjusted when changing the course of the research context (MASON, J. 2005). Thereby, the application of qualitative methods enabled us to understand the transformation of public spaces and the effects of new developments. According to LETENYEI (2004) during the research public spaces the best practice is when researchers take into consideration characteristics of the existing use of space which is based on observations. Therefore, in the empirical phase of the research, we conducted a field survey during which we did photo documentation. With participatory observations we explored the characteristics of the use of public spaces in a Hungarian medium-sized town, Kaposvár. The areas of observation were the inner-city falling under prohibiting regulations (Noszlopy Gáspár street and main square), an industrial area (named Nosztra) and supermarkets, where begging is taking place. The observations were made in the summer of 2015. In addition, we also visited the shelters of the homeless and the selective delivery points.

During observations we noted the gender and age of the square users and the activities they performed, the atmosphere of the observed area and the happenings. We recorded everything and we took photos. Participant observation can help us to explore the problems of the analysed area and to recognise the different ways of use (MADDEN, K. 2005; LETENYEI L. 2006). Besides the field-survey nine in-depth interviews were conducted between March and September 2015. Among the interview partners were four experts (i.e.

leader of the public space surveillance, the chief architect, a social worker and a politician), in addition we made five more life-path interviews with homeless people (local homeless, excluded homeless, homeless who lives next to the inner city, homeless who is directly affected and a homeless who was found through a social worker).

### Neoliberal turn of Hungarian urban policy

As part of the transition neoliberal approaches towards economic and social issues became dominant in the post-socialist countries of East Central Europe. According to EYAL and BOCKMAN (2002) the "success" of neoliberal thinking should be looked for in specific actor networks and in specific transition strategies. The aim of these strategies and policies was to create stability and increase the competitiveness of the economy. After 1990 the post-socialist governments started economic reforms based on neoliberal principals across East Central Europe, and their aim was to rearrange the economy through fast liberalisation of the market and privatisation (HIRT, S. 2013; HIRT, S. *et al.* 2013). Urban economic policies played a central role in the above mentioned processes (LEES, L. 1994, 2000; SMITH, N. 1996; SASSEN, S. 1996; MACLEOD, G. 2011).

The general socio-economic contexts of urban policies also substantially changed in Hungary after the change of regime. The embedding of the domestic market into globally organised production networks and the shift from a redistributive state towards a regulative one raised uncertainty within the society and heavy social conflicts such as growing unemployment, social polarisation, the spread of poverty that had to be managed locally (HARVEY, D. 1989, 2005, 2006; BRENNER, N. 2009). On the one hand, the city appeared in policy discourses as the scene of global competition, and on the other hand, as a relevant scale for handling social tensions. This reflected the socio-economic processes of the post-socialist transition and the neoliberalisation of the EU policies which could be observed in the urban orientation of spatial policies, thus, the problematisation of urban transformation (JESSOP, B. 2002; HARVEY, D. 2005; BRENNER, N. 2009; NAGY, E. and TIMÁR, J. 2010). Discourses related to European cities consider the city as the scene of culture, consumption and knowledge (e.g.: ESDP<sup>3</sup>, Leipzig Charter<sup>4</sup>). The "urban renaissance" is not only the tool, but the engine of the economic renewal.

Hungarian cities are also the targets of this neoliberal programme, where the city has become a commodity as well, and not only the cultural content but the urban space and the movements of citizens (SOJA, E. 2000, 2010). Urban space has become the subject of (symbolic) consumption for the citizens too and this has appeared in the everyday routines of people (e.g. choosing the place of residence, consumption habits, protecting public spaces) in line with the global urban trends (SMITH, N. 1996; SHIELDS, S. 2012). In addition, the city has been reinterpreted as an economic actor too: the "entrepreneurial city" has appeared in supporting the operation of capital and started to play important role as promoting investments that transform urban spaces. At the same time institutional practices have also changed in Hungary, for example due to the fast transformation of local regulations. Local elites has reinterpreted this as an inevitable result of economic revival (NAGY, E. 2005). The downsides (actually products) of transformation: the spatial polarisation and the increase of the informal economy have been interpreted as incremental problems in this context just like in the United States or in the United Kingdom (HARVEY, D. 1989). All these were reflected by local strategies and planning, by urban policies and by *the introduction of exceptional measures in planning* (SWYNGEDOUW, E. *et al.* 2002; NAGY, E. and TIMÁR, J. 2010).

3 [http://ec.europa.eu/regional\\_policy/sources/docoffic/official/reports/pdf/sum\\_en.pdf](http://ec.europa.eu/regional_policy/sources/docoffic/official/reports/pdf/sum_en.pdf) (download 2016.07.13.)

4 [http://ec.europa.eu/regional\\_policy/archive/themes/urban/leipzig\\_charter.pdf](http://ec.europa.eu/regional_policy/archive/themes/urban/leipzig_charter.pdf) (download: 2016.07.13.)

However, many groups, actually the majority of the local residents play a marginal role in forming urban discourses. Despite the fact that after the transition the individual's role and influence has fundamentally changed in Eastern Central Europe in forming the daily social practices and everyday life spaces. However, local societies became less able to convert the "rules of the game" in daily practices despite the fact that the adoptions of EU development principals have demanded the active participation of local residents, public-private partnership and transparency of urban policies (FÖLDI, Zs. 2009). Certain social problems (e.g. homelessness) were interpreted as "urban" problems, and these issues were defined and associated with urban spaces by policy-makers (MITCHELL, D. 1997; LYNCH, P. 2002; MAHS, J. 2005; O'SULLIVAN, E. 2007; MISETICS, B. 2010).

For the sake of analysis we distinguish two types of public spaces. On the one hand, the consumption spaces of the elite and the middle class – the highly appreciated spaces – and, on the other hand, the marginalised spaces (e.g. abandoned industrial buildings, empty inner-city buildings, public spaces under bridges) that are untouched by gentrification and can be used as temporary shelter by the homeless. According to SNOW, D. and ANDERSON, L. (1993) there is continuity between highly appreciated and marginal spaces, spatial definitions and meanings and values attached to those are constantly changing and are subject of debate. Processes of marginalisation decrease the extent of marginal spaces and make homeless peoples everyday surviving strategies uncertain (MAY, J. 2000). With developing marginal spaces homeless people are increasingly forced to use highly appreciated spaces so they get into contact with citizens who have a home (FELDMAN, L. 2006).

Urban policies tend to increasingly focus on public spaces (NEAL, Z.P. 2010). They are intended to facilitate the return of capital with tools like renewal of the historical city centre, local tax policies and with changing

the building regulations. However, the elimination and treatment of social problems in valuable urban areas are taking place with new practices (e.g. spatial banishment, changes in local regulations, eviction) (MITCHELL, D. 1995; ELLICKSON, C.R. 1996; BELL, E. 2011). Therefore, the city as the platform (tool) of capital accumulation becomes the focus of policies and the interconnected interventions of the state basically serve the growth of competitiveness (MOLOTCH, H. 1976; HARVEY, D. 1989; COX, K.R. 1998).

In our opinion, the political, economic and cultural elite wishes to reproduce the national and local class structure with the neoliberal urban policy tools. The interventions of the central and local state in the spatial processes serve to reproduce the existing social (power) relations and revanchist urban policy has a major role in these processes in Hungary too. Within this framework the elite uses the projects for physical renewal of the historical city centres for revalorisation through reinvestment as part of a top-down revolution (SMITH, N. 1996; MACLEOD, G. 2002). It can be also observed in the practices of the institutions carrying out the interventions, in the explicit goals of the projects and the results that clearly show growing social polarisation (SMITH, N. 1996; TIMÁR, J. and NAGY, E. 2007).

Thus, neoliberalisation processes in the urban policy arrangements could clearly be observed in Hungary after the transition. The social consequences of these policies aiming at boosting urban economies were considered secondary and no comprehensive concepts were prepared to deal with them neither at the local nor at the national level. This became especially obvious in the projects designed to renew the historical city centres which have resulted in social polarisation, exclusion and the edging out of the strongly marginalised groups of the society (e.g. homeless) from these places (MITCHELL, D. 1997; WACQUANT, L. 2001, 2009; TOSI, A. 2007; BENCE, R. and UDVARHELYI, É.T. 2013; UDVARHELYI, É.T. 2013).

## Urban rehabilitation and displacement

### *The reproduction of social relations by urban rehabilitation programmes in Hungary*

As a result of new urban policies and government arrangements urban space has become strongly neoliberalised in Hungary in the past decades. Manifestations of the process are urban development and rehabilitation plans and related institutional practices. The local elite has interpreted urban development as a synonym of economic development so the primary aim of urban development projects were to boost local economy at the expense of social sustainability (KOVÁCS, Z. 2009; KOVÁCS, Z. *et al.* 2013, 2015; KOVÁCS, Z. and SZABÓ, B. 2015; SZELÉNYI, I. and CSILLAG, T. 2015). These local efforts were also encouraged by national development policies and various EU programmes (the latter as the primary source of funding).

Urban rehabilitation projects have become symbolic parts of urban governance in the neoliberal era. They have contributed to the polarisation of urban societies and the exclusion of certain groups, while they should have promoted social integration and cohesion. Cities are not only the platforms of creativity and innovation but also (increasingly visibly) spaces of social conflicts (like exclusion or marginalisation). However, repositioning urban spaces in urban competition resulted in the transformation of urban spaces for the interests of local elites, investors, developers, and tourists. City rehabilitation projects have become the tools of the elites in Hungary too, in the belief that the renewal of the historical city centre can be the engine of local economic development and through explicit aims the power position of the elite will be reproduced too (MACLEOD, G. 2011). So these projects basically reflect the class-based urban policy ideas of the elite and the power struggles for implementing them affected such fundamental rights like housing, access to services or even the free use of public spaces (UDVARHELYI, É.T. 2013).

Urban rehabilitation projects have focused on well defined geographical areas since the middle of the 2000s' in Hungary. The aims of these projects were primarily to boost urban economy and the social problems were wished to be handled by them too. However, due to the shortcomings of the projects integrity (lack of connection to the overall development of the city, and overall enforcement of social interests), the social and spatial effects of these projects, were selective and detrimental to many people (NAGY, E. 2012). At the same time the practices of implementation and its institutional framework has also radically transformed, urban renewal interventions developed new forms of local governance which became less democratic and more driven by the interests of the local economic, cultural and political elites. This was reflected in the fact that the participation of local people became formal in the judgment of responses given to social problems and possible interventions. At the same time some movements (i.e. City is for all) succeeded in drawing the attention of public to the problems of marginalised groups and individuals (LEFEBRVE, H. 1995).

### *Revanchist city rehabilitation and survival strategies of the marginalised groups in Kaposvár*

In this section we illustrate how inequalities are reproduced by revanchist (neoliberal) political discourses through regulations focusing on the accessibility of the historic inner-city in Kaposvár. The physical renewal of the historical city centre by the elite entailed the appearance of tools of revanchist urbanism and the use of the principle of zero tolerance (SMITH, N. 1996; COCHRANE, A. 2007; MASSEY, D. 2008). The local political and economic elite used the renewal of the historical city centre as a tool to prevent by law the use of the urban core for the most marginalised group of the local society – the homeless (MITCHELL, D. 1997) (*Photo 1*).

In Kaposvár – just like in other cities that engaged with anti-homeless policies – local



Photo 1. The renovated main square in Kaposvár

stakeholders constantly reconstruct space according to their socio-economic and political interests (HARVEY, D. 2006; VÁRADI, M. and VIRÁG, T. 2015). This can be well observed in the implementation of city renewal projects founded mainly by the EU where such processes like exclusion of homeless became prevalent (BENCE, R. and UDVARHELYI, É.T. 2013).

Three factors justified the selection of our case-study area: (1) On the vacant plots located in the immediate vicinity of the historical city centre commercial development took place in the middle of the 1990s, so the new spaces of consumption were formed not so much on the edge of the city but rather in its centre. These spaces became part of the survival strategies of homeless people (e.g. redemption of selective waste for money, begging). (2) Among Hungarian cities Kaposvár showed the third highest number of homeless people living on the streets without any shelter in 2012. According to our interview partners there are about 350–500 people in Kaposvár (population ca. 63,000) who spend the nights on the streets, in unoccupied hous-

es or in abandoned industrial buildings. (3) With initiating the criminalisation of (aggressive) begging in 2004 the local government of Kaposvár was the first among countryside cities in Hungary where an anti-homeless law was accepted.

The reconquering of the historical city-centre (i.e. the exclusion of homeless people) took place parallel with the rehabilitation. In the planning phase of the project the local political elite introduced new, restrictive regulations and after the Hungarian Constitutional Court declared it as unlawful and initiated its termination the local charismatic leader and the economic elite urged the further application of these regulations. Local homeless people were very much aware of this. One of them says:

*“There is a loophole, and they have found this loophole. Punish the homeless anyway.” (D. Homeless man)*

The result of the procedure – financial penalties due to littering – is prison/detention since homeless people do not have the op-

portunity to pay the penalty because they do not have a permanent, secure income (WACQAUNT, L. 2008c). At the same time referring to crime prevention policies a CCTV system (155 cameras) was put into service legitimized by the idea of the “safest city” (BELINA, B. 2011; COLEMAN, R. 2005).

*“...the devices are able to transmit an image around the clock... that will let our police officers... be present at all points in Kaposvár at the same time”* (Kaposvár mayor post 11/30/2015)

The main function of the CCTV is obviously to control and exclude the undesirable people from the observed places with banning certain activities (alcohol and drug consumption in the streets, sleeping, begging, scavenging in the street) and with banishing marginal individuals (homeless, Roma and the poor) from city centre. We agree with the conclusions of COLEMAN, R. (2004), namely that the visible consequences (the growing urban poverty and polarisation) of neoliberal policy can be hidden by this practice and marginalised people can be excluded from certain places of the city (COLEMAN, R. 2003, 2004, 2005).

After the urban renewal project was finished (seizing the opportunities provided by national legislation) the historical downtown areas of Kaposvár became nominated as “homeless-free zones” by local political leaders, restricting the use of public space by regulations. To ensure the compliance of the regulations the power of public area supervisors was increased similarly to the police officers. Thus, the protection of public spaces based on the principle of zero tolerance has not only been validated by cameras, but were also sustained by personal supervision (UDVARHELYI, É.T. 2013).

*“I have asked the public area supervisors to effectively move around, do not tolerate drinking in public areas, sleeping in the bus stops, and to pay special attention to public spaces.”* (Interview with the mayor of Kaposvár 12/17/2014)

In addition, the local government bought and closed down with fences and gates a

number of downtown buildings, thus, reducing the number of accessible properties for homeless people. However, survival possibilities of homeless people were reduced not only in the historical city-centre by the local political elite. An emblematic abandoned industrial property near the historic centre – which was also regularly used by interview partners as shelter for the night – was demolished and the remaining part was closed with private security guards controlling the area (Photo 2). However, the former “users” found a new shelter at another similarly abandoned industrial plot. The number of homeless people dropped in the areas under prohibition, as a result of the regulations, and some of the “known” homeless got into jail.

Selective waste collection remained an important source of income even after the rehabilitation, but now interview partners do it more at night and at the less frequented spots and just the day before the dustbins are being emptied. Begging meant often a shame to the interview partners so they do it only after having no food for more days, but the penalisation of the activity did not change their hab-



Photo 2. A vacant building (previous shelter for homeless) closed down by the local government in the centre of Kaposvár

its. So despite the Constitutional Court's resolution the regulation has achieved its original purpose. According to our research findings the banning regulation had many other effects on the life of the city. Problems, conflicts related to homeless people appeared at many new places of the city outside the city-centre, also at places, which had not been affected by this problem before. Such places are: the edge of the city, housing estates and buildings used earlier for industrial purposes (*Photo 3*). The spatial displacement problem is clearly the result of the spatial exclusion policy. The regulations did not handle the real causes of homelessness (e.g. structural unemployment, lack of affordable housing) but criminalised the homeless people in certain areas with an attempt to make them invisible for the majority of the society. The acceptance of the regulation and the supporting behaviour of some part of the local population is due to the charismatic personality of the local politi-



*Photo 3.* Former industrial building and shelter for homeless people before demolition in Kaposvár

cal leader in our interpretation. He created a common platform around such problems which local citizens, investors and business owners and tradesman meet on a daily basis. The "homeless free downtown of Kaposvár" is a desirable thing for the users. While the living conditions of homeless continue to worsen, citing sociologist János Ladányi "this very serious problem is being moved from one place to another"<sup>5</sup> in Kaposvár.

### Discussion and conclusions

The local political and economic elite in Kaposvár used the renewal mechanism of the historic city-centre to reclaim the control over (some) spaces of the city. They used urban regeneration (which was implemented from EU funds and investments from the private sector) as a tool to boost the economy of the city (SWYNGEDOUW, E. *et al.* 2002; MACLEOD, G. 2011). The local mayor used his power and local legislative power to forbid the following activities in public spaces through systematic regulation-making processes: first "aggressive" begging (first time in Hungary), then scavenging, then "habitual use of the area of the historical centre" and finally "storing private property in a public space".

Besides making regulations more tools were used to narrow down the survival opportunities of homeless. They included city's architecture (spikes, benches), buying and closure or demolition of run-down inner-city buildings, transformation of homeless care, increasing security via CCTV and downtown patrols (WEBSTER, W. 2009).

Alternative survival strategies evolved among the social workers and homeless who reacted to exclusion. The homeless began to use new unoccupied houses and abandoned industrial facilities as a shelter – provoking new responses from the elite – at the same time the helpers did not only help homeless with the day care but with providing them

<sup>5</sup> <http://www.origo.hu/itthon/20080519-corvinsetany-bontas-kikoltoztetes-a-getto-lakoinak-sorsa.html>

information about the police/public area supervisor “raids” too. Thus, not only spaces of exclusion have been constructed in Kaposvár over the past decade, but the spaces of resistance were formed too (TÖRÖK, Á. and UDVARHELYI, É.T. 2006).

Neoliberal policies, revanchist attitudes resulted in the displacement of marginalised groups in Kaposvár in recent years (SMITH, N. 1996; MACLEOD, G. 2011). The nation-state delegated regulatory powers to the local level, which made it possible to prevent the access of unwanted people to the renewed historic downtown with reference to the safety of the citizens and also criminalised a wide range of everyday activities. Class-biased regulation-making process took place in Kaposvár which became a tool of the revanchist policy and this resulted in the reproduction of inequalities.

Anti-homeless measures that were intended to narrow down the survival possibilities of the most marginalised groups and were initiated by the local elite have achieved their objectives in many cases. Prohibition of scavenging is unconstitutional, but police and public supervisors in many cases unfairly penalise and bother homeless and not only in Kaposvár.

The extent of urban areas affected by the problem of homelessness has increased in Kaposvár, the previously not affected marginal parks of the downtown, housing estates, abandoned industrial sites, suburban areas have been reinterpreted as potential survival opportunities by many of the interview partners.<sup>6</sup>

Thus, class-based exclusion from urban space and criminalisation of certain behaviour leads to reproduction of inequality, not only locally but also on macro-social level, resulting in widening gap within the society. In this paper we explored the local factors in Kaposvár, however, similar social problems and mechanisms are known in Budapest and other Hungarian cities as well. The results of

the neoliberal urban policy are clearly the reproduction of class structure, the handling of some individuals as second class citizens, the strengthening of the socio-economic position of the local political elite.

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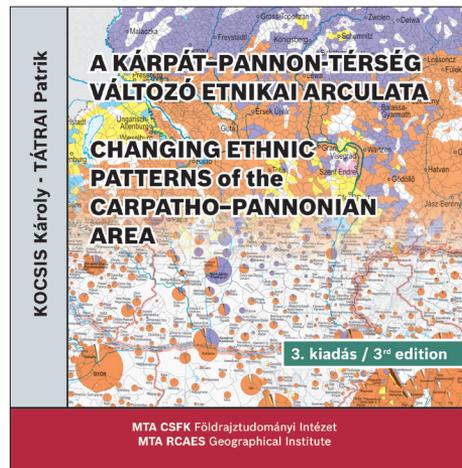
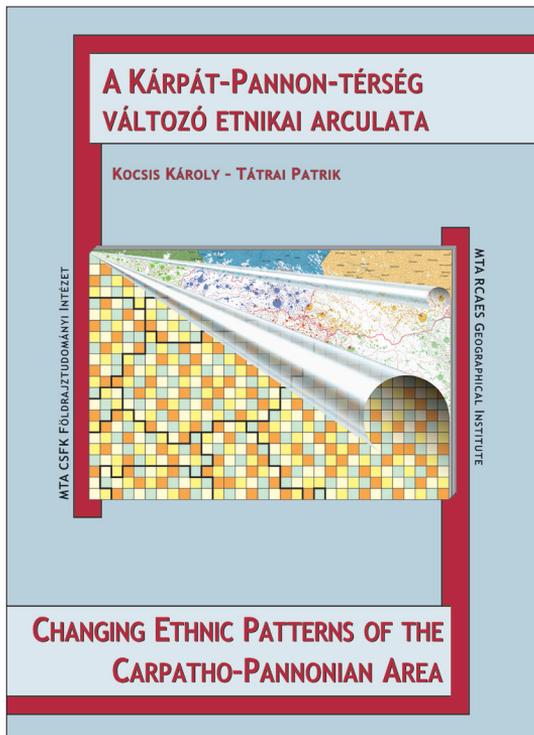
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# Changing Ethnic Patterns of the Carpatho–Pannonian Area from the Late 15<sup>th</sup> until the Early 21<sup>st</sup> Century

Edited by: KÁROLY KOCSIS and PATRIK TÁTRAI

*Hungarian Academy of Sciences, Research Centre for Astronomy and Earth Sciences  
Budapest, 2015*

This is the third, revised and enlarged edition of the Changing Ethnic Patterns of the Carpatho–Pannonian Area. The work is georeferenced and comes with a CD-appendix. The collection of maps visually presents the ethnic structure of the ethnically, religiously and culturally unique and diverse Carpathian Basin and its neighbourhood, the Carpatho–Pannonian area. The volume – in Hungarian and English – consists of three structural parts. On the main map, pie charts depict the ethnic structure of the settlements in proportion to the population based on the latest census data. In the supplementary maps, changes in the ethnic structure can be seen at ten points in time (in 1495, 1784, 1880, 1910, 1930, 1941, 1960, 1990, 2001 and 2011). The third part of the work is the accompanying text, which outlines ethnic trends in the past five hundred years in the studied area. This volume presents the Carpatho–Pannonian area as a whole. Thus, the reader can browse the ethnic data of some thirty thousand settlements in various maps.



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## “In memory of victims”: Monument and counter-monument in Liberty Square, Budapest

ÁGNES ERŐSS<sup>1</sup>

### Abstract

Conceived by the Hungarian government as a commemoration of the German occupation of Hungary and according to the inscription dedicated to the “memory of victims”, the monument in Liberty Square has been a scene of protest against a prominent emblem of the right-wing Hungarian government. The protest has taken the form of a counter-monument that contests the official meanings of the government-sponsored composition and especially the notion it conveys depicting Hungary as a victim of German occupation. Whereas the official monument evokes traditional forms and its aesthetic is neo-classical, the counter-monument consists of ephemeral features such as gradually accumulated written messages and everyday artefacts, and it is constantly built up by protesters. The counter-monument not only challenges the adjacent official monument and its notion of Hungary as a victim of German occupation; importantly, it defies the legitimacy of the official conception of victimhood by direct references to the suffering of Hungarian Jews at the period. This paper explores the politics of commemoration at the contested memorial site with an emphasis on the dialectic relationship between the official monument and an adjacent counter-monument. Focusing on a contemporary case-study in the centre of the Hungarian capital, it offers insights into resistance and protest as geospatial features of the politics of public memory.

**Keywords:** monument, counter-monument, politics of commemoration, public space, contested space

### Introduction

Imagine a square, encircled with magnificent historic buildings, palaces, tenement blocks, banks, insurance companies, and exclusive offices. Elegantly dressed managers passing by while children are playing in the shadow of old trees. Such scenery is not unusual to European cities. However, if one considers that in that particular square there is an extravagant triangle formed by a life-size statue of Ronald Reagan, a monument of Soviet soldiers and the heavily fortified US Embassy, then we arrived at the Liberty Square, to the heart of Budapest (*Figure 1*).

The configuration of edifices is the most striking visible example of the dense and multi-layered symbolic geography of the centrally located square of the Hungarian capital. This square has been subjected to a series

of symbolic space appropriation campaigns executed by consecutive political powers in the last two hundred years.

At the beginning of the 19<sup>th</sup> century the territory of today’s square was partially occupied by an enormous building where numerous political prisoners, emblematic figures of the anti-Habsburg Hungarian revolution and war of independence in 1848–49 were executed or imprisoned. During the Austro-Hungarian Monarchy, the prison, also known as the ‘Hungarian Bastille’, was demolished. As a remnant of revolutionary spirit, the surrounding streets were named after victims of the freedom struggle against Habsburgs, while the square was baptised as Liberty Square (Szabadság tér).

In the interwar period, often referred to as Horthy era (after Miklós Horthy, governor of Hungary between 1920 and 1944), new stat-

<sup>1</sup> Geographical Institute, Research Centre for Astronomy and Earth Sciences, Hungarian Academy of Sciences, H-1112 Budapest, Budaörsi út 45. E-mail: eross.agnes@csfk.mta.hu.

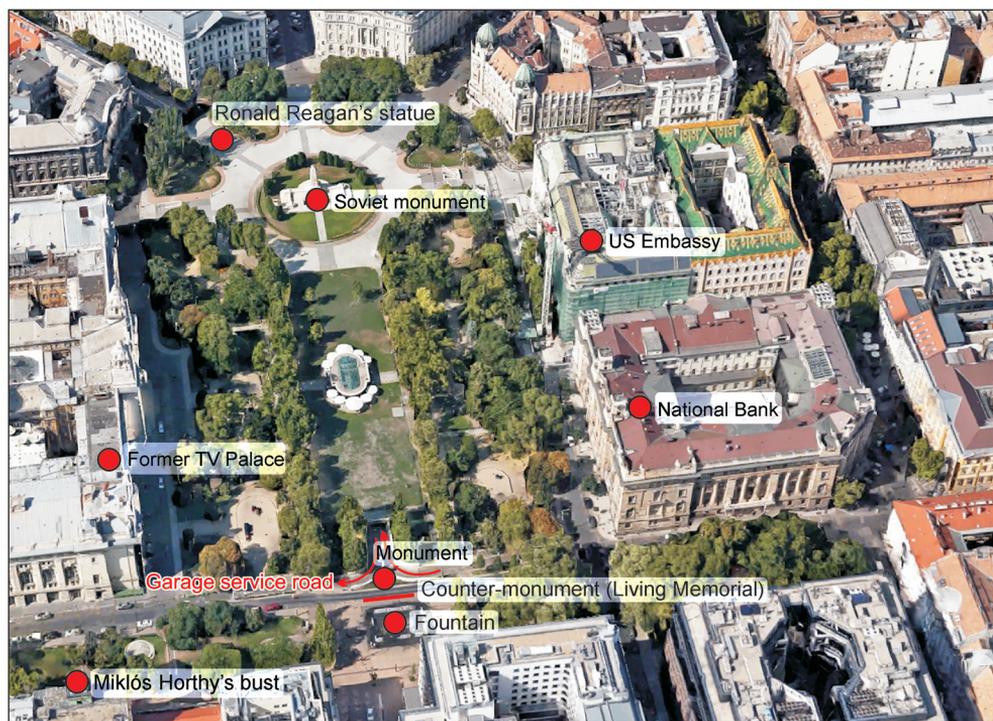


Fig. 1. Overview of Liberty Square (Szabadság tér), Budapest

ues and grandiose monuments symbolising the territories Hungary lost following World War I were installed composing a powerful and dramatic facade for regular irredentist events (ZEIDLER, M. 2007, 188–211). Not surprisingly, when the Red Army captured Budapest in 1945, the statues, as reminders of Hungarian nationalism and the previous Horthy era, were replaced to make room for the monument dedicated to the Soviet soldiers who lost their lives while fighting the Nazi military forces to *liberate* (as it was phrased for decades after) the Hungarian capital.

Following 1990, even though there was a debate about it, the Soviet memorial remained untouched (FOOTE, K. *et al.* 2000, 324–325). Unveiling the statue of Ronald Reagan in 2011, who is perceived by many as *liberator* of the countries beyond the Iron Curtain, further enriched the symbolic interpretation of liberty on the square. On the South side of the square, a Bauhaus building

houses a Calvinist church. Its name, Church of Homecoming, commemorates the 1<sup>st</sup> Vienna Award which rewarded Hungary the Southern part of Czechoslovakia in 1938. It was celebrated as great achievement of irredentist politics of the Horthy era. On the 75<sup>th</sup> anniversary of the Vienna Award, a bust of Miklós Horthy was inaugurated in the open staircase of the Calvinist Church, supported by right-wing Jobbik, the third biggest political party in the country. Even though the irredentist statues disappeared from the square, today the church and the bust stand as mementos of the interwar period.

Nevertheless, the contemporary history of the square was not without violence: in 2006 anti-government protesters besieged the seat of Hungarian National TV located on the West side of the square. The rally was ended by a brutal police response.

As a result of aforementioned symbolic political manoeuvres, today the square is packed

with historically and politically engaged monuments, spatial mnemonics of different regimes. Memories of mass-protests in support of different political ideas and powers juxtaposing various narratives of freedom and notions of liberty. The most recent element of the setting, dedicated to the victims of German occupation in Hungary in 1944, was installed in 2014. Ever since the artistic plan was published there has been an ongoing protest against it in various forms of resistance that culminated in the installation of a counter-monument, which is discussed in the present article.

### **Monuments, counter-monuments, living memorials**

Monuments and politics of commemoration have been in the focus of scientific interest, including human geography in the last decades. According to one, simple definition, a monument is built to “induce remembrance of specific events or people” (GREGORY, D. *et al.* 2009, 478). Monument-building has been a hallmark of modern nationalism and formation of modern nation states. A series of studies has thoroughly illustrated that monuments – next to other tools, for instance (re)naming streets – are applied by power to occupy public space in order to inscribe its specific narrative about the past, in many cases justifying its authority in the present (NORA, P. 1989; TILL, K. 1999; LIGHT, D. *et al.* 2002; FOOTE, K. and AZARYAHU, M. 2007; PALONEN, E. 2008; ROSE-REDWOOD, R. 2008; HOBBSAWN, E. 2015).

While in the 19<sup>th</sup> century heroic, figurative statues were preferred for celebrating national ideas and icons, in the late 20<sup>th</sup> century a major turn can be detected in the artistic comprehension and design of monuments. More and more artists found that traditional monuments “may only displace memory” reducing visitors to simple spectators instead of enhancing memory work of individuals and society. That notion induced the proliferation of counter-monuments – antiheroic in content, the figures rather conceptual

– which can be understood as “memorial spaces conceived to challenge the very premise of the monument” (YOUNG, J.E. 2000, 96).

The abstract aesthetics and non-traditional visualisation can be detected in case of national memorials as well, where the counter-monumental design is perceived as more appropriate to challenge the traditional ideas of nation, “mark the national ambivalence and uncertainty of late twentieth-century postmodernism” (YOUNG, J.E. 2000, 93). As STRAKOSCH, E. (2010, 268) argues: “Instead of presenting a simple story of triumph or martyrdom, they (*i.e.* counter-monuments) confront the nation-state with its own crimes and exclusions”.

Alternative forms of commemoration show great variety and resulted in mushrooming of different terms, like counter, non-traditional or non-monument. In their thorough article, STEVENS, FRANK and FAZAKERLEY (2012) introduce a system to bring more clarity to discussions on counter-monuments. According to their opinion, on the one hand, monuments can adopt counter-monumental design which aim is “to express subjects and meanings not represented in traditional monument” in any of five respects: subject, form, site, visitor experience and meaning. On the other hand, a monument can carry dialogic message in which case it “critiques the purpose and the design of a specific, existing monument, in an explicit, contrary and proximate way” (STEVENS, Q. *et al.* 2012, 952). The spatial position of a dialogic monument is also important, as it is often “(...) intentionally juxtaposed to another, pre-existing monument located nearby and that critically questions the values the pre-existing monument expresses” (STEVENS, Q. *et al.* 2012, 962). In contrast to traditional monuments, counter-monuments offer no clear and simple answers; they rather invite visitors to actively engage with the monument using all five senses and let those experiences help them to find their own interpretations (YOUNG, J.E. 2000, 120–139).

The act of memorialisation and practices of commemoration has also entered every

day settings of life. As SHANKEN described, so-called living memorials often take place in secular and utilitarian places “(...) drawing memorialisation closer to leisure, recreation, and the desire for cohesive community” (SHANKEN, A.M. 2002, 132). A flashmob in public space can be understood as living memorial, when certain part of space becomes temporarily occupied by a – for instance – commemorative art performance. Living memorials might distance themselves from the dominant way of remembering, but not necessarily question the narrative of the event or the person commemorated, if they do at all. To conclude, the major purpose of a counter-monument is to reject or renegotiate the original monument applying unconventional design, inviting visitors to use their senses to discover meanings and create their individual interpretation of commemorated events or persons.

In this paper it is argued that the official monument commemorating the victims of the German occupation of Hungary exemplifies the earlier traditions of monument design lacking intention of facing the past in a critical or self-reflected way, offering only one narrative of the past. However, the juxtaposed counter-monument, called Eleven Emlékmű (Living Memorial) not merely challenges the design, but the narrative of the official monument.

After drafting the political context, I offer a brief historiography of the installation of the monument and outline the major points of critique. This would help to understand the protest it evoked which takes the form of a physically tangible, ever changing and enlarging counter-monument and a discursive space, where open discussions and cultural events are organised by civic and political activists.

The main purpose of the paper is to show how the installation of a monument, an attempt of the power to gain visibility in a symbolically distinguished place, provokes civic protest which – by erecting a counter-monument – find a new channel of self-expression and representation.

## Political context

In 2010 the right wing-conservative Fidesz party won the parliamentary elections in Hungary. The landslide victory, which was soon to be named as “revolution at the polls” (PALONEN, E. 2012, 947) enabled politicians of the ruling party to obtain fundamental changes in various fields of the legal, social and economic life of the country. Among others a new constitution, an electoral reform, and new media law (e.g. forcing journalists to reveal their sources) were accepted (PALONEN, E. 2012, 947–951). Not only the new laws, but also the peremptory way how those went through the legislation process prompted protests. Even though from time to time thousands of people rallied on streets (VÁRNAGY, R. 2013), or supported the opposition movements by joining their Facebook sites, after couple of months the intensity decreased and the number of active supporters dramatically fell. In 2013, less than a year prior to the next elections, Prime Minister Viktor Orbán openly voiced his opinion that liberal democracy is failing, and the constitution – in power since 2012 – is consequently “non-liberal, but a national one” (ORBÁN, V. 2013).

Fidesz not only transformed the legal basis of the country, but also made tremendous efforts to imprint the beginning of a new era of political history on the symbolic landscape. Actually, symbolic politics was already a major element of the toolkit of the first Fidesz government (1998–2002). When analysing three architectural projects (including the new National Theatre) launched during the first governing period of Fidesz, Emilia PALONEN found that “The cultural institutions and their architectural forms became a tool for Fidesz to manifest its vision (...) for the future and inscribing readings of the past, definitions of the nation” (PALONEN, E. 2013, 548–549).

Symbolic politics remained important part of the politics of Fidesz when it came into power again in 2010: extensive renaming of public spaces commenced replacing foreign names with Hungarian ones and purging

potential leftist persona from the cityscape. Among the newly re-baptised street names or novel statues political and cultural figures of the conservative political traditions, primarily from the interwar Horthy era appeared, supporting the opinion that even though the nationalism of Fidesz was less radical as of the far right party called Jobbik, in order to “maximise votes they also sought to integrate some of the rhetoric of the right, including some references to anti-Semitism” (PALONEN, E. 2012, 947). The fact that the name of the country was changed from Hungarian Republic to Hungary or the Republic Square in the middle of Budapest was re-baptised after Pope John Paul the Second might be perceived as further elements of a national-conservative turn sympathising with illiberal political traditions and the controversial figures of the Hungarian conservative tradition from times of the Austro-Hungarian Monarchy or the Horthy era.

The reconstruction of Kossuth Square, the political centre of the country dominated by the magnificent building of the Parliament, offers another example of the symbolic politics pursued by Fidesz aiming to reinstall certain elements of public space that had been created in the interwar Horthy era. The Kossuth Square was envisioned to gain back the “artistic face of the square prior to 1944”, thus, three monumental statues that stood there prior to World War II but had been removed after 1945, were re-created.<sup>2</sup> Furthermore, opposite to the Parliament, a national flag was installed on a 33 m tall flagpole, which can be perceived as a clear reference to a previous flagpole, called National Banner installed in the nearby Liberty Square in 1928 as a central piece of the irredentist monument (DÖMÖTÖRFI, T. 1991). Reconstruction of Kossuth Square was not even finalised, when the government decree about installing a new monument on Liberty Square, proved to be symbolically so important for political powers in the modern history of this country, was announced.

<sup>2</sup> <http://latogatokozpont.parlament.hu/en/a-kossuth-ter-leirasa>

## History of the monument

The government decree was issued on the very last day of 2013<sup>3</sup>. It ordered the construction of a monument dedicated to victims of German occupation. The decree refers to the approaching 70<sup>th</sup> anniversary of the occupation and marked the deadline of finalisation of the construction on 19<sup>th</sup> March 2014. The government decree declared the project an issue of particular importance with regard to the national economy, thus, the implementation could start without obtaining official expert statement of – for instance – landscape committee and the construction company was commissioned without a tender. Similarly, (according to the official explanation due to the short deadline) the artist was directly appointed by the minister responsible for the implementation of the project<sup>4</sup>. The concept plan of the monument was presented and accepted as early as mid-January and was only approved by a five-member committee. The project documentation were first made public on 19<sup>th</sup> January in a blog post written by Tibor PÁSZTOR, a representative of opposition party in the 5<sup>th</sup> district of Budapest. As the owner of the land, the local government had to give permission for the construction.

Right after the plan became public on 19<sup>th</sup> January, at first leaders of the Hungarian Jewish communities raised their voice against it, soon followed by historians, art historians, artists, politicians, NGOs and concerned individuals inside and outside Hungary. According to the objections, the interpretation of the monument relativises the responsibility of the then Hungarian government, state administration and armed forces which played an active role in execution of the Holocaust of nearly half a million Hungarian Jews (PETHŐ, T. 2014; UNGVÁRY, K. 2014). The intensive criticism most probably contributed to the decision of the Prime Minister to suspend the construction until 31<sup>st</sup> March. Additionally, he showed open-

<sup>3</sup> 2056/2013. (XII. 31.) Government decree. Magyar Közlöny, 2013/225. 31.12.2013.

<sup>4</sup> PÁSZTOR, T. 2014.

ness to enter into discussion about the statue with representatives of Jewish organisations. However, two days after the Fidesz victory in the parliamentary elections, on 8<sup>th</sup> April, the construction was restarted without any notification (FEHÉR, M. 2014a). Eventually the last parts of the monument were put into place on 20<sup>th</sup> July, during the night (NOLAN, D. 2014). Events of the ongoing protest were extensively covered by international and national media (LALONDE, I. 2014; NEWTON, C. 2014)<sup>5</sup>. Notably the monument has never been officially inaugurated<sup>6</sup> and it has never been used in any official ceremony or commemorative event.

Remarkably, since March 2014, when the protest against the monument manifested itself in public space, a counter-monument compiled from personal relics, stones, photos, eviction notices has been established at the thin strip of the pavement right opposite to the official monument. Such visual resistance is strengthened by the presence of protesters, who organise regular public talks and cultural events around the counter-monument. Altogether, the monument gave immediately birth to a counter-monument and to an active opposition which has become the longest prevailing regular opposition movement against the Orbán Government. Controversies about monuments are not uncommon and mostly “pertain to their commemorative theme and/or artistic design” (AZARYHU, M. 2011, 131). In the present case study I argue that in the case of the monument dedicated to the victims of German occupation in Liberty Square in Budapest, the above mentioned two elements are present at the same time and their joint impact is enhanced by the authoritarian decision-making mechanism of Fidesz after 2010.

<sup>5</sup> <http://www.foxnews.com/world/2014/07/20/in-middle-night-hungary-sets-up-disputed-memorial-to-144-german-occupation/>; <http://www.jta.org/2014/04/08/news-opinion/united-states/amid-protest-building-of-controversial-wwii-statue-begins-in-budapest>.

<sup>6</sup> <http://www.kormany.hu/hu/miniszterelnokseg/hirek/nem-lesz-avatounnepege>

## The iconography of the monument and major points of critique

The state monument was designed by Péter Párkányi Raab, whose previous works were installed around the National Theatre, which is one of the major symbolic constructions during the first Fidesz government (PALONEN, E. 2013, 547). The composition standing on the southern end of the Liberty Square comprised by two main figures: an eagle, symbolising Nazi Germany and an angel as a representation of Hungary standing in front of the colonnade topped with a tympanum. According to the artist’s project documentation (which is not without misspellings and presents only sketches of the monument): the composition is an allegory displaying the battle between “two cultures”, where the eagle is brutal and aggressive while Archangel Gabriel stands still, and serene. His face gesture depicts suffering while the orb falling from his hand symbolises losing power, control over Hungary<sup>7</sup>. Under the tympanum the following is inscribed: “Monument dedicated to the victims of German occupation”. In an additional element attached to the monument with a text written in four languages (Hungarian, English, German and Hebrew) is corked: “In memory of victims” (*Photo 1*).

Critiques concerned three major issues: the monument’s spatial position, aesthetics and most importantly its symbolisation and historical narrative. Regarding the aesthetics and especially the location of the monument opinions were more or less unequivocal, and far from flattering. Nevertheless, both were dwarfed by the outcry over its content and symbolisation.

## A place not meant to be for a monument

Liberty Square has acquired prime position among the politically employed public spaces in Budapest. Consequently, a suitable location for a new monument in the already crowded

<sup>7</sup> Pásztor, T. 2014.



Photo 1. Main figures of the monument: the eagle and Archangel Gabriel. In the background the top of the Monument of Soviet soldiers. (Photo by the author)

square with dense symbolic charge poses a serious challenge. The monument (designed to only face one angle, the South) is placed on the south side of the Liberty Square, squeezed in between a service road of an underground garage and a narrow road with one-way car traffic (Photo 2). The unfortunate position impedes potential visitors who would wish to stand close to it, while stepping back is also not helpful, as the south end of the square is closed by a fountain, which partially blocks the view and definitely attracts the attention of visitors, especially in hot summer days (Photo 3). Consequently, for potential visitors the monument is not welcoming.

According to Péter György, aesthete, the idea behind choosing such location could have been to countervail the Soviet monument which stands on the northern side of the square. Although, the new monument fails to fulfil this hypothetical role as the Soviet monument, with a shape of an obelisk, is not only accessible from all directions,

but it offers something new to look at for the visitor who is walking around it from every angle (CZENKLI, D. 2014) (Photo 4).

At an early stage of the protest there were fears voiced that far right activists might use the road connecting the monument to the bust of Horthy, placed on the south-western edge of the square to rally. Finally, the most striking disadvantageous feature of the monument cannot be missed by visitors less educated in arts either: the seven meter tall composition, equipped with figurative elements and massive columns was installed onto such a little piece of land which is simply not suitable for a monument at all, especially to a national monument.

#### **“Messy nightmare”: Critics of aesthetics**

Following 1989, among the newly installed monuments in Budapest commemorating, for instance, the 1956 Revolution examples



*Photo 2.* The monument standing in a little piece of land, squeezed in between roads.  
(Photo by the author)



*Photo 3.* The monument, the counter-monument and the fountain. (Photo by the author)

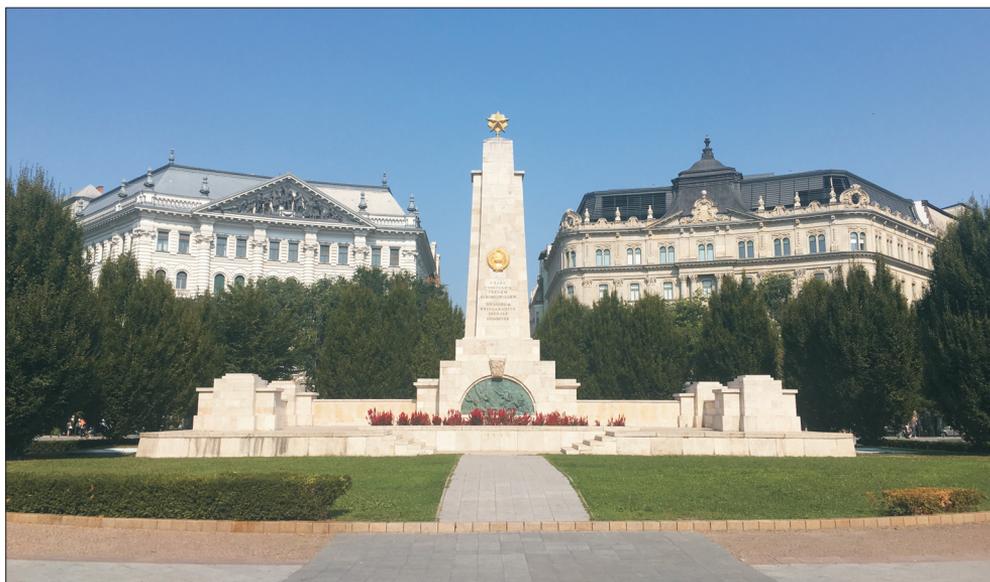


Photo 4. The monument dedicated to the Soviet soldiers died in World War II, standing on the northern side of the Liberty Square. (Photo by the author)

of abstract postmodernism and traditional figurative statues are equally present. Their reception by the public has been usually controversial, but, primarily, the latter ones are quite well accepted, some even became popular among locals and tourists (FOOTE, K. *et al.* 2000, 316–317; LEGÁT, T. 2013). In the reception of a monument by the public, both aesthetics and design tend to be important. It is especially true for the memorials of national importance, where the “poetics of presentation”, especially in the case of an abstract design, “elicited public opposition as unfitting to represent the monument’s commemorative theme” (AZARYAHU, M. 2011, 130–131).

The monument of the victims of German occupation is not abstract in its design, yet it provoked public opposition, and not only because of the interpretation and narrative it broadcasts but also for being too didactic, basically an aesthetic catastrophe. The composition adopts figures easy to decode, but the comprehension is further enhanced by inscriptions. Such didactic design in public art is rather out-dated: since the 1970s and 1980s

non-figurative compositions have been frequently used in public sculptures and monuments as well (YOUNG, J.E. 2000). Furthermore, as it was briefly outlined previously, recent trend in monument building supports the idea to move closer to people, as, for instance, the Reagan statue on the Liberty Square intend to do so. On the contrary, the monument dedicated to the German occupation is hanging “in between”: with the eagle on top of the seven meters tall tympanum and Gabriel standing in an inaccessible position from pedestrians the composition stands in higher and further position, making it way too difficult to engage with (CZENKLI, D. 2014).

The columns and the tympanum refers to the classical, 19th century iconography of monument building, while the androgen figure of Gabriel looks more modern resulting in a confused design. As the respected sculptor, György Jovánovics summarised: “This is not an up-to-date work. (...) Viennese neo-baroque mixed with social realistic kitsch (...). The symbolism and message of it, which was clearly conceived to serve political order, is

a messy nightmare” (FÖLDES, A. 2014). These words are in harmony with Emilia PALONEN’s assessment analysing the National Theatre built during the first Fidesz government: she concludes that it “aims to offer answers and capture meanings rather than playing with abstractions and, as Rév describes, its form is drinkable lemonade, easy for people to understand. (...) The elements of kitsch and historicism were typical of this style. (...) However, the monument on Liberty Square wishes to narrate one specific period of the country’s history not the meaning of nation, the following argument perfectly describes the case of Liberty Square monument as well: “Rather than opening space for thoughts, it closes it, gives content to the national identity and values – similar to the way in which the architect was chosen in disregard of artistic competition, which indicates the need of Fidesz to prescribe national values” (PALONEN, E. 2013, 547–548).

### “Falsification of history”: Critics on narration and symbolisation

The fiercest debate concerned the very core of the monument: its message and the symbols that were chosen to depict the narrative. Hungary’s history in the 20<sup>th</sup> century is overloaded with national and individual traumas, many of which have remained untold or kept in silence (KOVÁCS, É. 2001; GYÁNI, G. 2006; BRAHAM, R.L. and KOVÁCS, A. 2015). The role Hungary played in World War II, including the details and circumstances of German occupation or the Holocaust of Hungarian Jews, especially the role the Hungarian state and collaborators played in it, is one of those topics which is still not widely known and/or accepted by the wider society. Limited public discourse is reflected in the low number of public memorials commemorating the Holocaust (FOOTE, K. *et al.* 2000, 324). The problem can be distilled to one question: who is the victim and who is the perpetrator?

The state monument suggests that the evil eagle (Germany) is the perpetrator, while

Archangel Gabriel (Hungary) is an innocent victim, who lost her power (falling glob) during and under the reign of Nazi Germany. As a matter of fact, the deportations were launched only after the German troops occupied the country, but then, in a short period (three months) approximately 470,000 Jews (and other victims, like Roma) were evicted and deported to death camps, with active assistance of the Hungarian authorities and civilians (UNGVÁRY, K. 2014). Not to mention, that during the Horthy era, Jews were systematically and gradually stripped off their civil rights: the first *numerus clausus* law was adopted as early as 1920 while labour service (forced labour performed by primarily Jewish men who suffered brutal and cruel treatment of Hungarian gendarmes and army officers) was institutionalised in 1939, years before the Nazis marched into Budapest (LALONDE, I. 2014; PETHŐ, T. 2014; UNGVÁRY, K. 2014).

In form of an open letter leading historians clearly pointed out why the interpretation of history cast in stone in the monument is unacceptable: “the monument is based on a falsification of history, it cannot serve its [alleged] function. By presenting the victims of the Holocaust and the collaborators as a single victim, it insults the memory of the victims” (HORVÁTH, S. 2015). As Krisztián UNGVÁRY commented: the monument’s symbolism and the political intention behind it tries to “white-wash” Hungary’s role in the Jewish Holocaust in Hungary (UNGVÁRY, K. 2014). The monument not only blends together victims and perpetrators, but as protesters argued, by presenting the imperial eagle, a traditional German symbol, as perpetrator, it “shifts the blame further onto present Germany. However, the artist fails to represent the responsibility of the Hungarian state”<sup>8</sup>.

The public outcry was fuelled by the circumstances under which the decision-making process was conducted in a non-transparent clandestine way. For opponents of the government, taking into consideration

<sup>8</sup>The Living Memorial and the Szabadság Square resistance. [http://www.silentheroes.eu/attachments/02/04\\_01/LivingMemorial\\_PRESS.pdf](http://www.silentheroes.eu/attachments/02/04_01/LivingMemorial_PRESS.pdf)

the importance of such a monument commemorating a controversial and traumatic part of the country's history, a government decree issued on the last day of 2013 as a top-down decision (NEWTON, C. 2014; HORVÁTH, S. 2015) was perceived as an example of the anti-democratic and cynical abuse of power and offensive symbolic politics driven by the governing party (FEHÉR, M. 2014c). Moreover, political analysts also criticised the timing of the construction (only few months before the parliamentary elections due on 6<sup>th</sup> April 2014). Even though the winning position of Fidesz seemed certain, to secure it the monument could have been used to convince some voters from far-right Jobbik. The Jobbik, the third most powerful political party in the country, welcomed the construction. However, they insist on removal of Soviet monument at the same time<sup>9</sup>.

### Outline of history of the protest

As the plan of the monument was revealed to the public, it instantly stirred up objection inside and outside the country. The protest activity – based on the level of institutionalisation – can be divided into three periods.

Between January and March 2014, national and international organisations, politicians, and historians issued open letters in press to express their objections. For instance, the Federation of Hungarian Jewish Communities criticized the plan as – in their view – it depicts Hungary as a victim of Nazi occupation, the symbolism of the statue seems downgrading the responsibility of Hungary, although it was an ally of Germany before and during World War II. Almost all Jewish representatives in the US Congress signed a letter in which they call attention that Jewish community in Hungary should participate in the decision how to remember their suffering during the Nazi occupation (FEHÉR, M. 2014b).

<sup>9</sup><http://www.economist.com/news/europe/21595515-row-about-statue-reignites-controversy-over-nazi-occupation-statue-limitations>

Prime Minister Viktor Orbán in his response highlighted that the planned monument was not a Holocaust memorial, but it is rather to pay tribute to the sufferings of both Jews and non-Jews during the war (SOKOL, S. 2014). He also stated that the monument was supposed to emphasise that when the Nazi military took the control over the state on 19<sup>th</sup> March 1944, Hungary lost its sovereignty and was limited in decision making. He did not dispute that the Hungarian political elite collaborated with the Nazi, but as he wrote "there would have been no deportations without the German occupation, no wagons and no loss of hundreds of thousands of lives" (FEHÉR, M. 2014b). In media close to the government the monument was primarily perceived as a memorial wish to remind to the loss of sovereignty of the country (BORÓKAI, G. 2014). Germany expressed concerns, when noticed that "the actual decision about the monument was made very quickly and without wider debate"<sup>10</sup>.

A new form of protest emerged on 23<sup>rd</sup> March. A flashmob, titled "Living memorial-my history" was organised by artists, philosophers, sociologists, curators, civic activists, many of them involved in previous anti-government protests. According to the invitation published on Facebook, attendees were asked to bring personal items "and place their own sacred symbols – a symbol of willingness to repent and to forgive – onto this unsought gravestone of our history"<sup>11</sup>. Hundreds of people participated actively in the flashmob, bringing artefacts and establishing the first elements of the counter-monument, later called Living Memorial.

The second phase of the protest was marked by specific dates: it started on 8<sup>th</sup> April, when the construction of the monument was re-launched and lasted until 20<sup>th</sup> July when it was finalised. That nearly four months can be considered as the most active period of the protest: every day a group of protesters

<sup>10</sup>[http://hvg.hu/itthon/20140122\\_A\\_nemet\\_nagykovetsegnek\\_is\\_van\\_mondanival](http://hvg.hu/itthon/20140122_A_nemet_nagykovetsegnek_is_van_mondanival)

<sup>11</sup>[http://www.silentheroes.eu/attachments/02/04\\_01/LivingMemorial\\_PRESS.pdf](http://www.silentheroes.eu/attachments/02/04_01/LivingMemorial_PRESS.pdf)

were present taking care of the items of the ever-growing counter-monument and regular cultural events were organised.

Beginning on 20<sup>th</sup> July 2014, the third phase entailed as institutionalisation of ostensibly popular protest. Since spring of 2014, the counter-monument on Liberty Square has become a fixture of the cityscape. Similarly, the activist groups grown out of the protest are also regularly present not only on Liberty Square, but on the activist scene in Budapest as well. One group, called Eleven Emlékmű – az én történelmem (Living Memorial – My history) organises public discussions in topics like politics of memory, actual political or social issues. The activity of Szabadságsszínpad (Freedom Stage) focuses on taking care of the counter-monument but they also arrange cultural and commemorative events (HEGYI, D. 2015, 87). Both groups are engaged in civic activism and charity. For instance, they commemorated the 100<sup>th</sup> anniversary of Armenian Genocide, organised donations to the refugees in the summer of 2015 or joined numerous protests of teachers and health-care workers in 2015–2016.

### **The iconography of the counter-monument**

The counter-monument, named Eleven Emlékmű (Living Memorial), was established on 23<sup>rd</sup> March when the first personal artefacts were placed in front of the construction site. It is an ever-evolving composition made up by personal relics, like family photos, hand-written family stories, eviction notices, personal belongings, stones (some indicating the date and place when and from where the given person/family was transported to concentration camp) (*Photo 5a,b*).

Before 20<sup>th</sup> July 2014, such artefacts were placed around the construction site. Each and every piece of the counter-monument was installed by activists over and over again every morning. Since the finalisation of the state-monument the installation has a stable position: the items are distributed on a narrow section of the pavement facing the official monument.

Next to the personal relics, two white chairs are essential part of the counter-monument. According to the creators' (among many others: György Jovánovics, András Rényi, Szabolcs Kisspál) intention the chairs facing each other are invitations for discussion: anybody is welcome to enter the discussion about the monument, the protest or that part of the history (HEGYI, D. 2015, 84–85) (*Photo 6*).

Holocaust survivors and their relatives shared memories during the daily events, joined by historians, artists or activists. The major point was to open a discussion, a discussion which had not happened before the construction of the monument. Thus, the purpose of the counter-monument was to offer a narrative of the history of the German occupation different from that represented by the state-monument. As Péter Béndek phrased in his speech during the first flashmob when asked fellow-citizens "to tell, to share their family memory holds or remembers about our shared past" (HEGYI, D. 2015, 81).

In fact, the counter-monument is an ever-changing assemblage of printed and hand-written papers, inscribed stones, photos, and two chairs. Furthermore, – as "living" items – the counter-monument is enriched with plants and flowers which can be understood as symbols for life and the living. Daily routines like watering and nurturing the plants or lightning candles can be considered as activities to keep alive the memory, so as the Living Memorial itself. Also, as AZARYAHU noticed in the case of Kikar Rabin in Tel Aviv (AZARYAHU, M. 1996, 507), such ritual activities might contribute to the institutionalisation of the unofficial memory site. This is in stark contrast to the static character of the state-monument and its version of frozen memory; cast in stone, this frozen memory is rigid in form and oblivious of personal and familial memories.

The counter-monument challenges the official monument with its content/message and aesthetics as well. By showing personal items, letters, family photos it brings the focus to the individual perspective of the events clearly challenging and, thus, subverting the authority of the official monument. Regarding the aes-

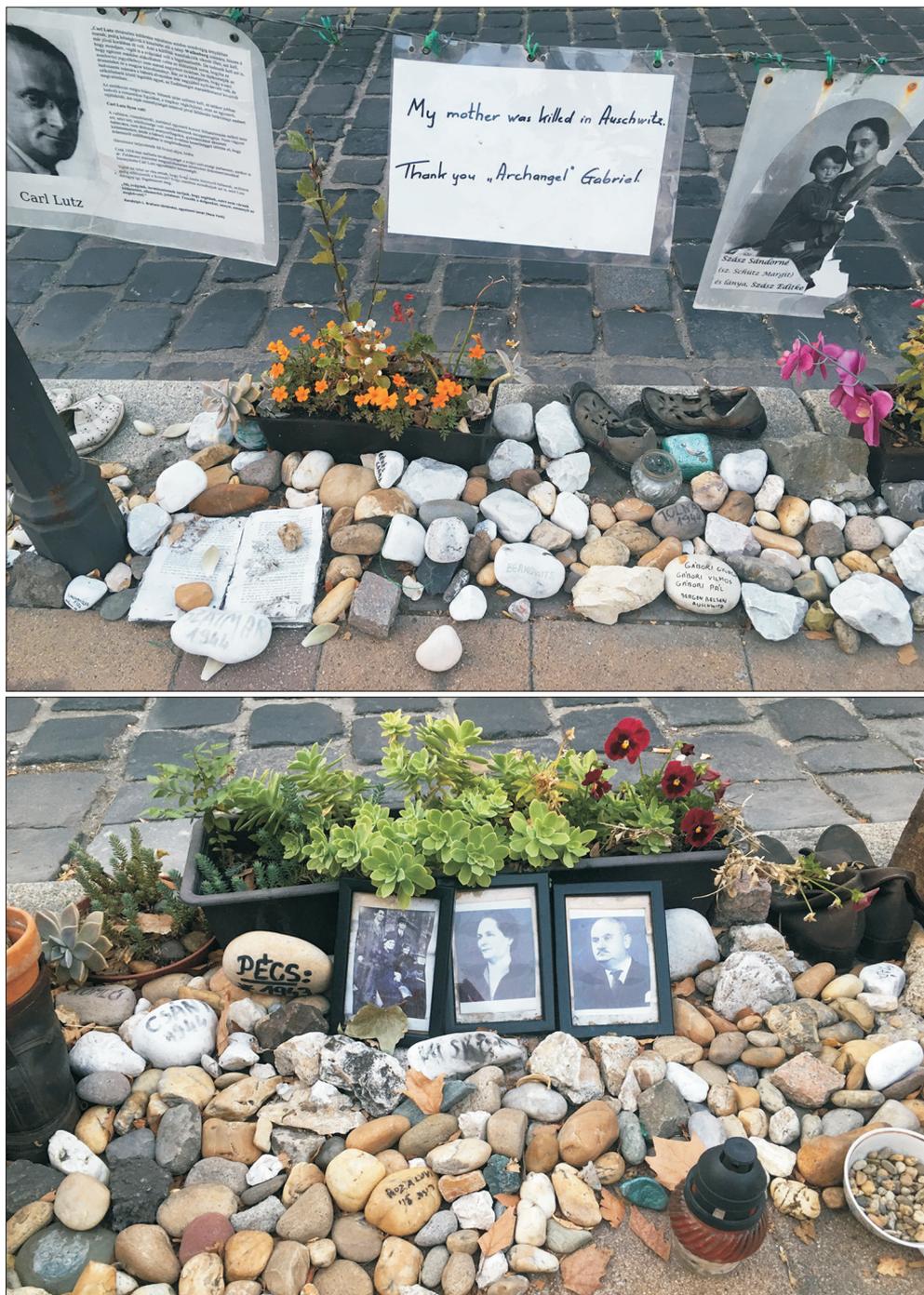


Photo 5a,b. The counter-monument (Living Memorial) compiled from personal relics, items and texts. On Photo 5a the handwritten paper says in English: "My mother was killed in Auschwitz. Thank you Archangel Gabriel". (Photo by the author)



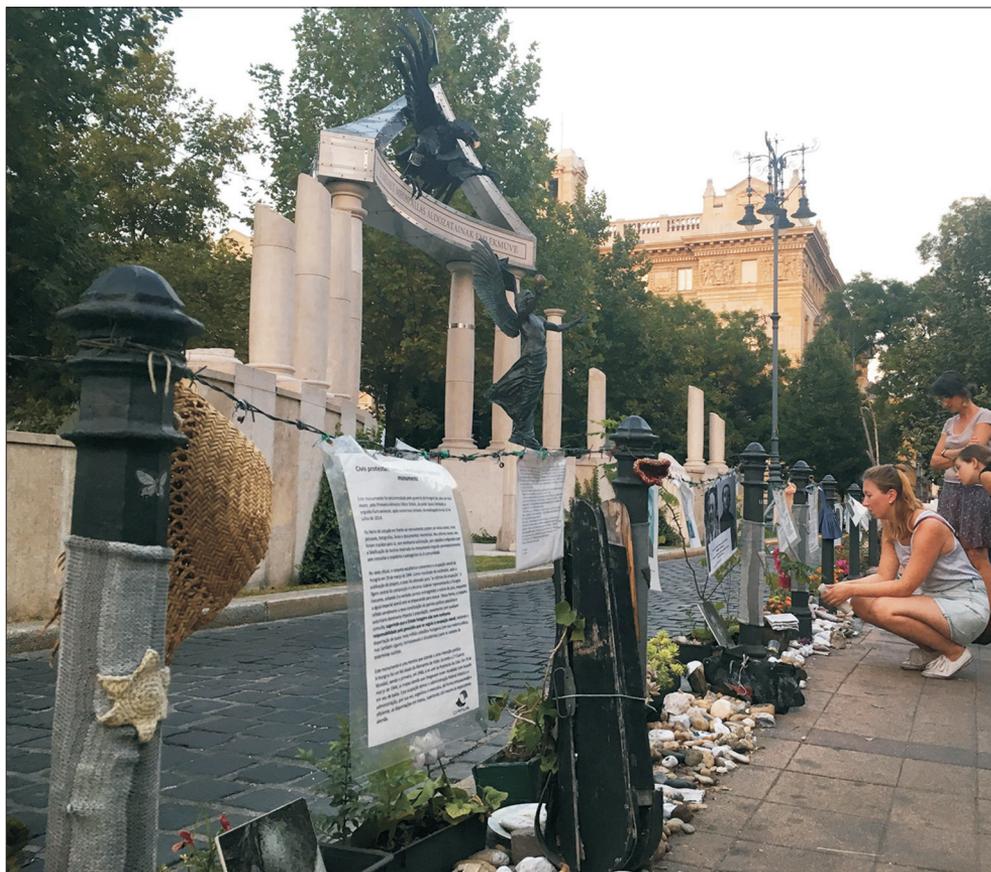
Photo 6. Two white chairs in the installation inviting for discussion. (Photo by the author)

thetics the official monument applies simplistic symbolisation and conventional metaphors (e.g. angel, eagle) while the family memories, diaries, personal belongings serve as unique testaments, inviting the visitor to spend time there and engage with the items (Photo 7).

Furthermore, the counter-monument is in constant motion: anyone can touch and add new pieces or leave messages. The tangible character further stress out the striking difference with the official monument which stands on the other side of the road oddly

squeezed in a tiny spot, impossible to touch, or even step close to.

Moreover, the Living Memorial is not only alive because of the personal items and flowers it includes: it has a personality, as activists are ready to inform or start a conversation about the monument and the protest with the visitors, including foreigners: short description is available about the protest on the spot in more languages including English, German, Hebrew, Russian, French and Hungarian languages (Photo 8).



*Photo 7. Visitors in front of the counter-monument. (Photo by the author)*

Altogether, the Living Memorial on Liberty Square can be perceived as an adequate example of a counter-monument: while the official monument is a clichéd, artistically outdated composition, installed as a result of a top-down political decision, the juxtaposed Living Memorial – compiled from constantly enriched relics – has a human, personal and tangible character. The memorial born as a result of a bottom-up initiative, due to narratives broadcasted by the commemorated persons' individual stories invites to interaction and creates a connection between past and present (which would be the major purpose of any monument) strengthened by the presence of activists.

### **Concluding remarks**

If we accept NELSON and OLIN's argument, a monument's social relevance and vitality is correlated with their capacity "to coalesce communal memories and aspirations" (NELSON, R.S. and OLIN, M. 2003, 6), the state-monument dedicated to the victims of the German occupation is a failure. The composition, besides its weird and utterly unfortunate spatial position and highly questionable aesthetic value, represents a narrative, which is not only misleading, but is based on dubious interpretations of the past. Instead of opening a discussion to come to terms with the traumas the nation went through



*Photo 8.* One of the regular afternoon events of Activists of Freedom Stage. (Photo by the author)

in World War II, it represents a blurred vision of victimhood, without intention to practice self-criticism and exempts the state from responsibility further procrastinating the long-time necessary public discussion and memory work.

However, since there was no unveiling ceremony and no official commemorative event took place there, the monument failed to become part of the political landscape of power, which has been important element of political agenda of the governing Fidesz party. Interestingly enough, the attempt of the government to inscribe its power to the space in a square already charged with symbolic traditions and meanings, resulted in complex and partially unintended consequences: it gave birth to a counter-monument and induced vivid, power critical civic activism.

The counter-monument, as a testament of victims, is in an intensive, dialectic relationship with the official one: the mixture of personal relics, the presence of activists, the regular events embodies what is missing from the monument: it is visible, accessible, tan-

gible, alive and ever-changing. Nevertheless, I would like to call attention to the paradoxical nature of the relationship between the monument and the counter-monument. Even though the original purpose of the activists was to prevent the construction of the monument, actually, the official monument is the one that justifies the presence of the protest while the existence of the counter-monument keeps alive/protects the official monument from oblivion. At the time of writing that protest is the longest prevailing continuous anti-government action in Hungary with a more than two year long history.

To conclude, the state monument – neglected by its creators and rejected by the opponents of the government – offered opportunity for a group of civilians to gain visibility and develop a successful activist forum. In addition, the Liberty Square, charged with a long tradition of continuously rephrased meaning of liberty, is filled with the spirit of protest once again.

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## Resilience in post-socialist context: The case of a watermelon producing community in Hungary

MÁRTON LENDVAY<sup>1</sup>

### Abstract

The aim of this paper is to test whether the concept of resilience can be applied to rural communities in post-socialist transition countries such as Hungary. Resilience, a concept engaged with the dynamics of change, has gained popularity in recent years following the post-2008 crisis and has become a core theme of academic, policy and lay discourses in the Anglo-Saxon world. The ongoing processes of socio-economic transition within the post-socialist environment have also attracted wide attention in the past decades, although not within the frameworks of resilience thinking. The concept of resilience is missing from post-socialist discourses and has not been applied to rural communities before in an Eastern European context, although the nature of post-socialist transition characterised by complexity, cross-scalar processes and multiplicity of actors involved make it an especially suitable field for resilience studies. In this paper, we aim to flag the potential directions and successful application of the concept of resilience both as a research topic and as a tool for researchers of the post-socialist space while we caution for the potential pitfalls and misuses of the concept and critically analyse aspects that attracted wide debates. We illustrate how rural community resilience may be conceptualised on the example of the watermelon producing community of Medgyesegyháza, Hungary.

**Keywords:** resilience, rural community, neo-liberalism, post-socialism, actor-network theory, assemblage, non-human agency

### Introduction

The concept of resilience thinking – as understanding a system's capacity to absorb disturbances and adversity so as to maintain its original level of functioning – emerged in the field of rural geography, regional planning and popular discourses during the new millennium. The notion of resilience arose as a response to crises. Crises have always hit rural regions and the post-2008 crisis is just one of a series of socio-economic disruptions affecting places, spaces, and systems. This crisis, however, happened simultaneously with the emergence of other environmental risks, forming the coupling of “a deep economic crisis with a perceived threat of an imminent ecological crisis, above all because of climate change” (HUDSON, R. 2010, 12). This intersection of somewhat traditional scientific and

policy research interests culminated in the emergence of the new research agenda, resilience, embracing research on economic instability, environmental sensitivity and other potentially profound domains of transition (SCOTT, M. 2013). Beyond applications of resilience focusing on urban regions, ecosystems etc. ‘rural’ resilience is especially useful because it directly links peoples, economies and the natural environment they rely on, live on and make their living off. This wide applicability and its growing popularity made rural community resilience a catchword.

One may even pose the question what the added value of introducing a new concept could be, if, at all it would have a different meaning from vulnerability, stability and especially sustainability. The recent success of the notion of resilience is beyond doubt due to the emergence of a ‘post-sustainability’

<sup>1</sup> Department of Geography and Earth Sciences, Aberystwyth University, Aberystwyth, Ceredigion, United Kingdom SY23 3DB. E-mail: mal59@aber.ac.uk

discourse admitting that the ideal of sustainability – as reaching eternity by a once in a lifetime fine-tuning of systems – has failed and shocks and stresses we cannot prepare for will always occur. Conceptualising the difference between sustainability and resilience is not an easy task (LUDWIG, D. *et al.* 1997) and has not attracted sufficient attention until now. In his works on the dynamics of sustainability STIRLING, A. (2014) regards durability, stability, resilience and robustness – as dependents of temporality of change and potency of action – as necessary but individually insufficient dynamic properties of sustainability; in his formulation resilience is a component of sustainability.

Although thinking about rural change and persistence has a wide heritage and long history in fields such as community development (ADGER, W.N. 2000), community health (ALMEDOM, A. 2005) and studies of resource dependency and sustainability (MARSDEN, T.K. 2003; SMITH, E. and MARSDEN, T.K. 2004), the more explicit focus on ‘rural community resilience’ feeds from two markedly different strands of inquiry. Being situated on the crossroads of various approaches, the complex concept created a hybrid of ecology and psychology (LENDVAY, M. 2013a).

At the same time, another traditional strand of works has been interested in post-socialist transition; a process that has been characterised by processes of change and persistence on multiple scales in the former socialist states in the past quarter-century. More than 25 years after the regime shift the notion of post-socialism is not a completed process of change, but an ongoing transformation that includes:

- a mixture of the images of a pre-socialist era,
- legacies and memories of (imagined) socialist past (KAY, R. *et al.* 2012),
- the results and images of a transition process from the collapse of socialism through the period of democratisation and privatisation, the accession of the EU and the global economic crisis since 2008, together with joining a global competition,

– and the variability (HERRSCHEL, T. 2007) of personal stories that determine how members of the communities view the above three (LENDVAY, M. 2016).

In this paper, we argue that resilience is a concept that may help us understand why and how rural regions of the post-socialist space change the way they do, how certain legacies of the past remain dominant while mixing with new processes and result in multiplicity and a turbulent environment. The question we aim to answer in this article is: how can resilience thinking be applied to a rural post-socialist context? We are also interested in what the most promising avenues for applying the approach are and how we can avoid possible misuses.

This article discusses the potentials of resilience-thinking on the example of a watermelon producing community of Hungary. We start this paper by introducing the markedly different origins and definitions of the concept and indicate how these appear in the existing literature and introduce a theoretical framework we find the most useful approach in human geography. In the following sections, we indicate three fields of debate and also caution the readers to how resilience should not be treated. We then turn to the empirical analysis and discuss how resilience thinking could appear in a rural Hungarian context based on the theoretical foundations. The discussion synthesises the lessons of the empirical analysis and in the conclusions, we briefly summarise our findings.

## Theoretical foundations

### *Two traditions of resilience thinking*

Works on rural community resilience originally apply one of the two significantly different approaches: social-ecological-systems (SES) and community psychology. These two coexistent ways of thinking about change in rural regions have many implications on how community, change and resilience are viewed. Authors often claim the two

approaches evolved simultaneously in the 1970s from the fields of ecology and child development psychology, therefore, those applying them either acknowledge HOLLING, C.S. (1973) or GARMEZY, N. (1973) as founders of resilience thinking (CARPENTER, S.R. *et al.* 2001; BROWN, D. and KULIG, J. 1996/97). Interestingly, deliberate attempts were made recently to integrate the two approaches (e.g. BERKES, F. and ROSS, H. 2013).

SES approach is based on the idea that instead of focusing on only one subject, we should view a complex system that is built up of many interrelated components placed on different scales. This approach defines resilience as a measure of the amount of change a system can undergo and still retain the same controls on structure and function or remain in the same domain of attraction (CARPENTER, S.R. *et al.* 2001). This definition implies that the system possesses multi-equilibria where a change in the configuration or stability of equilibria leads to the phenomenon of bifurcation (LUDWIG, D. *et al.* 1997). According to the SES model modifications on a lower ‘faster’ scale can lead to changes in the functioning of a higher ‘slower’ scale, and thus transform the whole system – this is the basis of panarchy and the four-phase adaptive cycle metaphor (growth, equilibrium, collapse, and reorientation) that are key heuristics of this approach (GUNDERSON, L.H. and HOLLING, C.S. 2002).

Economy-related studies such as those on resource dependent communities often apply this approach. In his reaction to common mistakes appearing in adaptive systems’ analysis WALKER, B. (2012, 29) highlights:

- “A system cannot be understood or managed at one scale, they are inherently multiscale and their dynamics are dominated by cross-scale interactions.
- Attempt to make a system very resilient in one way, at one scale, can lead to it becoming less resilient in other ways at other scales.
- Resilience is not about not changing. Trying to keep a system in one particular state, or protecting it from disturbance in an effort to prevent change, lowers its resilience. (...)

– Resilience is neither good nor bad. There are many examples of very resilient undesirable system states (dictatorships, salinised landscapes). (...)

The approach derived from community psychology (GARMEZY, N. 1973; KAPLAN, H.B. 1999) focuses much more on the adaptive capacities of individuals and groups, and their ability to recover after a disaster (‘bounce-back’ or ‘return to normal’ resilience) or to follow a single development pathway (‘evolutionary’ or ‘bounce-forward’ resilience) (SCOTT, M. 2013). As EXTERCKOTER, R.K. *et al.* (2015, 117) put it very characteristically, most of such works look at how “different communities react and restructure themselves” when facing crises. To cope with stresses caused by social, political, and environmental change communities engage community resources in overcoming adversity and taking advantage of opportunities in response to change (e.g. AMUNDSEN, H. 2012; BUIKSTRA, E. *et al.* 2010; ROSS, H. *et al.* 2010). A very strong connection is assumed here between resilience and social capital (CHESHIRE, L. *et al.* 2015), the local power and capacity of communities to maintain their own futures. AMUNDSEN, H. (2012) BUIKSTRA, E. *et al.* (2010), ROSS, H. *et al.* (2010) for example identifies community resources, community networks, institutions and services, people-place connections, active agents, and learning as dimensions activated in processes and activities in the course of a respond.

Using a similar approach, while discussing community resources MAGIS, K. (2010) highlights the role of community capital besides other forms of capital, natural or infrastructural capital for instance. She describes community capital as resources invested in community endeavours, defining it as “communities’ *ways of knowing* the world, their values, and their assumptions about how things fit together. It is represented by symbols in language, art, and customs” (emphasis added) MAGIS, K. (2010, 406). Referring to FLORA, C. *et al.* (2004) MAGIS, K. (2010) adds it is this cultural capital that forms perceptions of life events and that is able to mobilise social rules and trigger power within a community.

As visible, the different approaches to rural resilience tend to either focus on structures, materials and establishments or foreground to the agency of community members as individual actors. Recognising the shortcomings resulting from the gap between the two very different approaches recently there have been calls for the dissolution of this binary by applying a relational perspective focusing on interactions (DWIARTAMA, A. and ROSIN, C. 2014, DARNHOFER, I. *et al.* 2016). We argue here that resilience in human geography should dissolve the theoretical dichotomy and treat both large scale structures and agency of individuals on the common ontological framework. We suggest applying relational approaches such as Actor-Network Theory or assemblage theory.

### A relational approach

One such relational approach is Actor-Network Theory (ANT) (LATOUR, B. 2005) that in this context draws on the idea of relationality, contingency and distributed agency of actors and the boundlessness and ephemerality of actor-networks with especial regards to how agricultural products constantly reproduce the rural network and at the same time modify its configuration (DWIARTAMA, A. and ROSIN, C. 2014). Another approach, assemblage theory of DELEUZE, G. and GUATTARI, F. (1987) – and its interpretation by DELANDA (2002, 2006) – is concerned with interacting parts and emergent wholes leading to flat ontologies that are “made exclusively of unique, singular individuals, differing in spatio-temporal scale but not in ontological status”, according to DeLanda’s definition (DELANDA, M. 2002, 47). Assemblages are built up of components that are defined by both physical and symbolic properties. As these components come together they establish new entities that are both materially assembled and symbolically coded with new, emergent properties.

Both ANT and assemblage theory allows us to consider structures and materials as having

an agency, but the major difference is that actor-networks are extremely volatile, assemblages are more tightly set together. What is more, assemblage theory enables us to think through how communities are stabilised through the discourses and coding and meanings attached to certain components. Therefore, it not only concentrates on adaptability and new contingencies as ANT does, but thinks of more fixed entities that are still able to change in certain ways if the components are put together in new ways via ‘lines of flights’ DELEUZE, G. and GUATTARI, F. (1987).

Relational approaches such as assemblage theory not only offer a theoretical but also an analytical framework to think about change. We find therefore assemblage theory an approach suitable to enable us to understand how communities – including people, non-human components, discourses, rules and regulations – come together and become a whole of interacting parts where functions of components are coded in one way or the other. This allows us to think through how people engage with each other, how they relate to large scale events, to the agricultural products and the land but assemblage theory also shows us how agricultural products trigger the performance of community actors for instance.

### Uses and misuses of the concept

The different understandings and approaches to resilience generate three fields of debate that require special attention when putting the concept into practice. Unless we think through how we relate to these questions, we may easily apply the term resilience as a catchword.

#### *Awareness and intentionality*

Until now until now resilience was dealt with as a property that is visible, a process where we follow events, a concept that is revealed in some ways to community members, planners, researchers etc. Disaster readiness

(NORRIS, F.H. *et al.* 2008), tackling anticipated disruptions (ADEY, P. and ANDERSON, B. 2011), climate change mitigation but also the ‘strengthening’ of resilience, in general are all a part of an *intentional* process of *coping* where *deliberate* actions are taken. However, the ability to resist change and maintain function and identity are also coded attributes of all systems. Communities are ‘resilient’ and perform some sort of stability and adaptability subconsciously ‘by nature’, without any deliberate, intentional or planned actions taken. The resilience may lie in a structure, a state of mind, a behaviour pattern that all exist before a shock would hit the community – and such properties may even absorb a force of change without anyone noticing. Rural community resilience may, therefore, not purely be interested in crises, shocks, disturbances and other drivers of change present at a farm scale for instance (DARNHOFER, I. *et al.* 2010), but much more on how community functions, operates, how resilience is domesticated and embedded in everyday life.

#### *Descriptive or normative assumptions*

Secondly, when speaking about resilience, it has to be unravelled (LENDVAY, M. 2013b) how we understand the concept from the aspect of normativity (BRAND, F.S. and JAX, K. 2007). In short, this means if being resilient is good at all (and for whom): if stability, persistence or the ability to transform and to adapt are the desired pathways. Also, as resilience is more than following change and implies maintaining stability, it should be clarified in what respects change should be allowed in order to secure stability in other ways. This often does not happen and more recent works – especially lay and policy discourses – seem to forget about the highly normative manner of the notion of resilience, thus, completely oversimplifying the concept. HOPKINS, R. (2008) for example considers resilience itself as ‘a desired state’ – that is a complete misunderstanding of the basic concept. Following such abuses to the idea of resilience

JOSEPH, J. (2013, 51) even asserts “although we can broadly agree on what resilience is, the conclusion must be that it does not mean very much”.

#### *A form of neoliberal governance*

Derived from the train of thought above, when speaking about ‘rural community resilience’ it emerges a question what we consider by ‘rural community’ and even more, what the function of the community is in making the countryside resilient. More precisely, the question is whether ‘community’ is a) the subject of our enquiry and serves as an unlucky synonym of rural *region* and is the site of certain events in say, an economic context (PIKE, A. *et al.* 2010), b) perhaps it is a metaphorical entity as the site that shall be preserved in a changing environment or c) whether it has some more function. Community has often been viewed as an assemblage of interacting individuals (BRIDGER, J.C. and LULOFF, A.E. 1999; PANELLI, R. and WELCH, R. 2005) and their engagement through social networks that is the key to personal well-being via social support systems it offers to individuals (MAGURIE, B. and CARTWRIGHT, S. 2008). Therefore, a community itself may act as a tool for individual health and economic well-being so the smallest entity of ‘rural community resilience’ is not the group but the individual that actually takes certain actions. This implies a downward rescaling opening a discourse that “responsibilise risk away from the state and on to individuals and institutions” (WELSH, M. 2013, 15). According to JOSEPH, J. the concept is genuinely suitable for neoliberal forms of governance and “despite its claims to be about the operation of systems, is, in practice, closer to a form of governance that emphasises individual responsibility” (JOSEPH, J. 2013, 38).

This neoliberal attitude often appears in governmental plans and community toolkits and guidelines. While the U.S. Homeland Security Council (2007, 32) for instance, calls for “high-level organization and efficiency

among multiple actors". The UK Government goes even further as in its framework on community resilience it asserts its "commitment to reduce the barriers which prevent people from being able to help themselves and to become more resilient to shocks" and states that "communities (...) will have to look after themselves and each other (...). Communities will also need to work together, and with service providers, to determine how they recover" (Cabinet Office 2011, 3).

In the following sections we shall refer to these points claiming that the adaptability of a rural community is not purely the outcome of intentional actions, resilience may be about following a desired pathway as well as it may be treated as a descriptive term on remaining between threshold limits, and finally, that resilience cannot be confined to speaking about powerful community actions.

### Research methodology

This study looks at how rural community resilience can be conceptualised on a case-study focusing on the watermelon producing community of Medgyesegyháza, Békés county, Southeast Hungary. The study is built on non-representational methods (THRIFT, N. (1997) concerned with the performative 'presentations', 'showings' and 'manifestations' of everyday life (ibid, 142) as we follow CARPENTER, S.R. *et al.* (2001) and DARNHOFER, I. *et al.* (2016) believing that aspects of resilience may not be directly observable and measurable. In the course of data collection 25 semi-structured in-depth interviews were conducted between July and December 2013 with farmers, traders, local politicians and decision-makers and other stakeholders on community members' accounts and opinion of the processes and phenomena they experience related to farming and community life. Beyond formal interviews, numerous informal conversations were carried out in the frame of ethnographic research. This ethnographic research extended beyond the collection of textual data as methods including

participant observation were also deployed in order to have a broader picture of how the community operates. This enabled us to explore those themes and issues that farmers either deliberately avoided to mention for some reason, or did not mention as they are simply not of any interest to them. Only during the process of working on the watermelon fields with day labour and loading watermelons for the traders could we understand how the fruits are treated, viewed and handled. Although the original plan was to treat the interview data and records on community life as factual, 'true' data it was found necessary to develop the research with taking into consideration Weberian substantive rationales (KALBERG, S. 1980) people follow.

### Aspects of community resilience in the watermelon producing community of Medgyesegyháza

Viewed from a broader perspective, the watermelon producing community of Medgyesegyháza is located in a region classified as 'socio-economically disadvantaged'. It is characterised by a local economy based on agricultural production and the primary processing of agricultural goods coupled with low-level education and high unemployment rates that lead to a decrease in population with massive out-migration. The region is still seeking its new development pathway following the regime shift that caused the local economy to collapse – which remains highly dependent on agriculture and watermelon production since.

Although only rough estimates exist on the volume of watermelon produced and the number of people involved in farming, annual sales of watermelon seeds, Single Area Payment applications and productivity estimates give a good indication of the location and size of the industry. On a national scale, farmers have an output fluctuating around 150–200 tonnes on 4,500 ha land involved in watermelon production out of which above 2 000 ha land is located in Békés county in

the Southeastern corner of Hungary and especially converging around the nodal village of Medgyesegyháza (Figure 1). Due to the favourable natural conditions of the land and the highly intensified technology deployed in this location approximately 100–150 tonnes, more than two-thirds of the national output of watermelon is produced in the Békés region. As a consequence, whole community economies and settlement identities rely on its production.

### The rise of watermelon production and beyond

Despite its current role, watermelon has not always been the primary product of the region. The local farming community has been dominantly focusing on arable paprika production before WW II, and peanut production until the 1970s before the whole community turned its interest to watermelon production. Such major transformations happened within a period of



Fig. 1. The location of Medgyesegyháza and surrounding area

only a few years' time: farmers recall the rise of watermelon production to take place between 1980 and 1983. The ground for focusing on one agricultural product was a response to collectivisation, a key component of the socialist agricultural system. Within the socialist collectives, farmers were allowed to privately cultivate only 1 ha croft lands where they tried to maximise their profit by producing crops they could sell at a high price, but that required intense care. The reason for shifting from peanut to watermelon was a response to emerging globalisation processes and pressures trickling down to a local level and became embodied by the cheap import peanuts of the Middle East and North Africa. By transforming their agricultural orientation, farmers managed to maintain their income levels, but following the changing trends had wider implications in the local community. Farmers constantly question whether they will be able to cope with external shocks and stresses.

The stress any farmer would mention as the most important factor jeopardising the community are low, and what is even more important, fluctuating market prices. As a result of moving to a neoliberal economy in the past years unpayable debt and bankruptcy of farmers many turned away from watermelon production, others even committed suicide – an event locals refer to simply as 'watermelon holocaust'. Hungary's EU accession of 2004 has also been viewed as a threat bringing in new discourses, reshaping established markets and human connections and competitors embodied especially by Greek and Italian producers who not only flood the Hungarian market but take over the export markets as well.

Interestingly, as the elderly generation still has the knowledge of peanut farming, the lands and climatic conditions remain unchanged, universal machinery are sufficient for tillage, and many households still have the peanut roasters, there are no physical barriers to the return of the peanut-age if the financial return would be more favourable. However, currently, more farmers consider extending corn production instead of returning to peanut as it is more calculable and easily mechanised.

### Deeply embedded practices

In this paper, we argue that the resilience is more than the ability of a community to give responses to external forces by deliberate, planned actions. It is also a property unintentionally reproduced simply by daily practices and thus, embedded in how people treat materials and how they tie symbolic roles to them. Shocks, disturbances jeopardising the community, therefore, stem from internal processes, not only global phenomena. Watermelon production carries a number of such peculiarities that make it different from other cultures in many ways and these attributes, coupled with the habitus of community members, have a wider impact on how the community operates and is able to transform.

Firstly, current watermelon production is highly labour and technology intense and with the development of production techniques, it is becoming even more so (see *Photo 1*). Transplanting, grafting, the use of plastic tunnels, irrigation are all only recent developments in the farming technology. Before the regime shift farmers were short of capital to complete such investments and that these activities became in common only in the past 10–15 years. Beyond the very high financial investment demand, another implication of technological development is that it revealed the materiality of watermelons. Opposed to other arable production forms, establishing plastic tunnels, watermelon planting, hoeing and harvesting cannot be automated and is done by hand. Due to the weight and vulnerability of the fruits picking is done with a large number of seasonal labour hired by the farmers and picking follows a careful selection of ripe fruits. The physical and financial exploitation of the workers is an essential component to securing competitive prices and cheap human labour is a constant variable to the securing of the existence of the watermelon culture.

Secondly, opposed to some agricultural products (cereals, peanuts etc.) having a storage life of months, watermelon is a perishable product that has to be consumed within a few days after picking. Also, opposed



Photo 1. Watermelon grafting as a high labour intense activity. Source: LENDVAI, M. 2014, private collection

to other perishable goods well-known in Medgyesegyháza (such as cucumbers, paprika) the customer demand is not steady but is extremely volatile – it highly depends on the weather at the point of possible consumption. Coded by how we consume watermelons, it has an extremely high price in the times of the season when the weather is warm, but not many fruits are ripening. This causes internally generated shocks on the low scale fast cycles of the adaptive system: farmers seek to sell unripe fruits, thus, triggering customers to turn away from Hungarian watermelon and collapsing the markets. A farmer described this situation as:

*“the first watermelon fruits reach their size and weight of picking around June. But their quality is way under the standards: you know, their sugar content is low and they taste ugly, more like squash. The season has not yet started but*

*customer demand appears in Germany with the summer, and watermelon has a high price on the market. Now this trader guy ‘Menyus’ appears in the neighbouring village every single year and is highly tempted to forward unripe fruits to the market. He will always find producers willing to pick and sell their products under quality but at a high price, these fruits will enter the food chain and eventually appear on the supermarket shelves! Both producer and trader make a really good deal – in the short term. Customers desperate for the refreshing fruit will buy the unripe watermelon, but only once. They will never trust our watermelon for the rest of the season. Retail dealers and foreign clients turn down future orders and our complete watermelon industry will face hardship because of a handful of producers breaching rules of the community!”*

Therefore, the changing materiality of the watermelons reveals the habitus of many

community members in terms of their low willingness to stick to community rules and their inclination towards following an opportunistic, neoliberal behaviour instead.

### Coping and community answers

With all the internal and external pressures, how could then watermelon production be made more adaptive? The hardship watermelon producers suffer are reported by the media every summer (e.g. KUN, I. 2006; SZARVAS, Sz. 2011) including accounts about how community members try to tackle the adverse situation. In the past years, images have often appeared in the news about farmers dumping watermelons in front of supermarkets as a protest against their pricing practices (see *Photo 2*). This rather naive way of attracting attention has often been criticised and experts instead pointed on the unorganised food-chain, claiming that the post-socialist legal-economic environment is still short of providing a calculable environment.

Recently, in 2013, more organised community-wide action emerged when the so-called Hungarian Melon Non-profit Association was established, an organisation that became notorious after it got engaged in a price-fixing scandal with the support of the Ministry and a number of retail chains (CSÉPAI, B. 2015). According to farmers' accounts people, in general were happy that their issues have been taken up by a pressure group, however, the intervention was not long-lived at all and had a limited reach especially as it hardly affected the low export prices. At a first glance, following the dominant discourse of what community engagement, the result of social capital and community resilience may mean this pressure group would be responsible for resilience, even though it was built on a very few local elites and lay farmers were left out of the discussions.

Searching for other forms of cooperation between farmers, the local cooperatives – or Producer Organisations – as multi-actor networks (TREGGAR, A. and COOPER, S. 2016), namely Medi-Fruct TЭСZ Producer



*Photo 2.* Watermelon producers protesting against low retail prices in 2008. *Source:* <http://www.blikk.hu/aktualis/dinnyeozon/54zmz9w>

Organisation and Magyar Termés TЭСZ Producer Organisation have to be taken into account. Interestingly, these should be the establishments that fulfil the organising, knowledge sharing roles the above-mentioned association aimed at. The POs, however are characterised by a very low level of trust between farmers and the management and so farmers seek alternative ways of cooperation instead. There is a thread of inquiry here into the post-socialist transition worth mentioning: the struggle between winners and losers of the regime shift (SWAIN, N. 2003), the bad feeling towards socialist cooperatives lead to the limited role of the formal cooperatives. Fuzzy and uncoordinated interest networks leave the community dispersed and vulnerable to low market prices.

The possible solution to tackle some of the issues comes from establishing a more strict definition of what 'quality watermelon' should be. A 'recoding' of the fruit by the amended Hungarian 82/2004 (V.11.) FVM statutory order on quality requirements watermelons should match attempted to restrict the ability of the fruit as a non-human object to modify the complete community assemblage. It is once again a change in the coded relationship between farmers, their produce and markets that determine how and when they connect.

## Discussion

The question whether the rural community of Medgyesegyháza is simply 'resilient or not' is incomprehensible. Medgyesegyháza is resilient in so far as watermelon production has been the flagship product of the municipality for the past 30 years; farmers have been constantly learning and developing their technology and were able to implement unorthodox measures when it came to securing farm gate prices. However, both the number of local population and farmers engaged in watermelon production is decreasing and the community may easily lose its identity if they drop watermelon farming for other cultures – the question is where the thresh-

old limits are. Here resilience is much more embedded in structures of daily life than the planned agency of community actors.

We argue here that resilience in this sense is an extremely ambiguous term. Viewing community change from a wider perspective, we may ask what happened at all if the watermelon industry collapsed and the farming community of Medgyesegyháza ceased to thrive on watermelon farming. Would that be a sign of resilience? It should be visible by now, that resilience is more than the response of a single entity to an individual shock, but the interplay of overt actions and processes and deeply embedded structures. We may determine what properties of the rural community shall remain constant (e.g. the income level of the farmers, the identity of a unique farming culture) and treat resilience thinking as a normative tool of governance to reach this single goal. Resilience, however, will always remain a value-free way of thinking about change and cross-scale relationships.

Despite all the risks surrounding the concept of resilience, there are potential avenues where the concept could be harnessed to better understand the changing post-socialist environment. In any of the following cases, a holistic approach must be applied unfolding the interconnectedness of components of the rural environment and the impacts of certain events on different scales.

Firstly, by applying a historical perspective we may seek to answer questions about how the ongoing post-socialist transition from planned economy to a neoliberal system tumbled existing structures, built new ties between people, institutions, markets, discourses etc. and how these filter down and become a lived experience. It is important to understand in what ways agricultural communities may have gained new possibilities and became vulnerable to previously unseen globalisation processes at the same time. Of especial interest here is the EU accession of many post-socialist states that may have offered the reach of new markets, but that required more discipline and vigilance from farmers. New relationships were established

between farmers and markets that clashed with the traditional habits. These new, hybrid forms of capitalist, neoliberal and the remaining socialist attitudes created a unique economic and social environment.

Secondly, the post-socialist environment has been characterised by 'low' social capital where the low level of general trust, the high role of kinship, the opportunist behaviour of actors or an excessive role of elites may restrain the adaptability of the community and may make it vulnerable to shocks. In practical terms, this arrangement of social capital reveals itself in the all-pervading impact of local politicians, the high socio-economic influence of those persons already in some sort of power before the regime shift. Also, due to the memories of the socialist cooperative, there is a low willingness to take part in formal cooperation. By building on the concept of social capital, we may investigate the structures of human and institutional relationships and networks, explore the forms of community engagement and cooperation, and unfold which actors the drivers of the existing community-wide actions actually are. Critically analysing social relations and structures of the community leads us to understand how people are able to determine their own futures via cooperation, and to what extent they are vulnerable to – or even, are the source of – economic shocks.

Thirdly, extending our inquiry to non-human components such as materials, technologies, discourses, we may investigate how such components, their physicality and the meanings people attach to them exert power in both stabilising and reshaping the community with special regards to the impact they may have on human relations. In particular, a potential pathway for such investigations is to tie together broader properties of the post-socialist space and the changing materiality of objects, such as the agricultural products. Farmers of Eastern Europe have traditionally suffered from the lack of capital which prevented them from introducing new technologies and products. Grafting, for example, a very investment demanding technique could only appear ten years ago, but the spread of the use of expen-

sive, quality seeds is also a new achievement that results in more expensive produce and changing relationships between farmers, seasonal labour and agricultural products.

Fourthly, a resilience approach may help us understand the 'limits' of communities, and define those points in space and time where and when they irreversibly lose some functions or develop others. This inquiry may look beyond the financial reasons (such as changing subsidiary payments) and consequences of functional changes and investigate what impact this may have on culture and identity. Processes characteristic to post-socialist states such as mass out-migration and subsequent hardships within the labour market, the loss of local knowledge, but also changing environmental conditions such as climate change and the following demand for irrigation may all lead to shifts in agricultural cultures and irreversible loss of community identity. It is a question, however, where the tipping points for these events take place and defining the threshold limits is also a resource for well-grounded policy interventions.

No matter which one of these approaches we follow in our research, we have to keep in mind a number of general rules. There is a high risk of conducting comparative studies, as selecting the right case-studies and the set of common denominators for analysis may narrow the scope of the study. Also, not taking into consideration the very local factors during comparing, the whole concept may easily become simplified and the required holistic approach may collapse. Similarly, research on 'strengthening' resilience is a very risky task. Such an undertaking will also implicitly have to focus on a limited number of variables and selected processes. We highly recommend to clearly define 'resilience of what to what' CARPENTER, S.R. *et al.* (2001) shall be strengthened, also to assert what identity, form of functioning, economic output level, population number etc. is meant to be preserved and 'what lines of flight' (DELEUZE, G. and GUATTARI, F. (1987), forms of transformation we consider as acceptable when speaking about resilience itself as a policy goal.

## Conclusions

Resilience thinking in geography has become extremely popular in the past decade in the Anglo-Saxon literature. Its popularity in academic, policy and lay discourses quickly resulted in resilience becoming a catchword with a limited meaning as it carried two conflicting meanings at the same time: resilience either meant an ability to change or an ability to remain in a stable condition. At the same time, having its origins in ecology and psychology, traditional applications focus either on broader structures or actions of individuals, and so the existing literature is characterised by a structure-agency dichotomy. Resilience has also become imbued with neoliberal values as works on community resilience often used the term in a normative way assuming intentionality, what also made it a tool of neoliberal governance.

However, resilience means much more than a respond to a shock, or the adaptability of a community to cope with adversity. In its original meaning, it is the interplay of process embedded in daily actions involving humans, institutions, non-human objects but also beliefs and discourses that mark the directions of possible transformation and stabilise the community assemblage at the same time. When used as an analytical tool, resilience is a concept that helps us understand the dynamics of such adaptability and persistence, and unfolds why and how regions and communities change or manage to maintain functioning and sustain their identity.

At the same time, resilience has not been used in a post-socialist context so far. We argue here that the characteristics of the post-socialist environment make it an ideal field for applying resilience thinking, and vice versa, the post-socialist transition and the processes within post-socialist states can be better understood by applying resilience thinking. We find possible uses of the concept in a rural post-socialist context to focus on how large-scale economic and political processes of post-socialist transition trickle down and become lived experiences, to ana-

lyse the impacts of community engagement and cooperation, to investigate the role of changing non-human components, and to examine where the points of irreversible community transformation are in post-socialist transition. Resilience thinking has a significant potential in research in the fields of geography in post-socialist states and we expect the spread of works on resilience in the forthcoming years following the introduction of the concept to the post-socialist research environment.

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# AQUINCUM

## Ancient landscape – ancient town

Edited by  
KATALIN H. KÉRDŐ and FERENC SCHWEITZER

*Geographical Institute Research Centre for Astronomy and Earth Sciences HAS*

*Budapest, 2014. 188 p.*

Geomorphological–paleoenvironmental studies supporting archeological excavations and investigations are to be considered a new trend within the broader sphere of studies on environment and geomorphology. By publishing the latest achievements of researches of this kind carried out on the territory of Aquincum and in its wider surroundings this book may equally reckon on the interest of professional circles and inquiring audience.

Therefore the publication of such a volume of somewhat unusual character is welcome. The project could be completed as a result of the close cooperation of two important branches of studies, notably geography and archeology. They both have long lasting traditions in our country and on this occasion were represented by two prominent institutions, the Geographical Institute of the Hungarian Academy of Sciences, and the Aquincum Museum of the Budapest History Museum. Their contribution has made possible the publication of this book.

The studies were aimed to clear up the role of those natural factors which exerted a profound influence on the development of the settlement structure during the Roman Period. Romans had a special ability to realize advantages provided by geomorphological characteristics and they had made a good use of natural waters, flood-plain surface features and parent rocks for their creativity.

The volume is also deemed as a pioneering work with regard to the richly illustrated presentation of geological, geographical and other natural features exposed in several places in the course of archeological excavations. A short summary shows the most important objects of the Roman Period related to natural endowments and traces of activities of the time leading to environmental transformation.

Based on geomorphological evidence a new answer is proposed to a previously raised problem whether the Hajógyári Island existed as an islet already in the time of the Romans. Another intriguing issue tackled is the purpose of the system of trenches found in several places along the Danube River.

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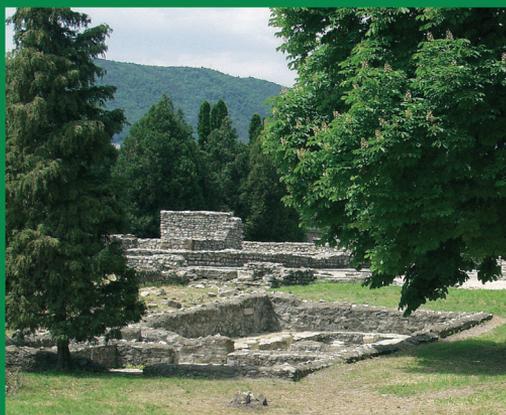
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# AQUINCUM

*Ancient landscape – ancient town*

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## Landscape metrics applied in geomorphology: hierarchy and morphometric classes of sand dunes in Inner Somogy, Hungary

KATALIN GYÖRGYÖVICS and TÍMEA KISS<sup>1</sup>

### Abstract

Landscape metric is mostly used to quantify landscape patches. However, these patches could also be geomorphological forms, thus using traditional landscape metrics their shape and spatial distribution, or their dynamics could be analysed. The aim of the paper is to study the geomorphological applicability of different indices studying the aeolian forms of Inner Somogy (SW Hungary). In the present research 15 landscape metric indices were calculated with Patch Analyst 5.1 and vLATE 2.0. The negative aeolian forms (blowout depressions and holes) have high number but small size, whilst the positive forms (parabolic dunes and hummocks) have large number and complex spatial structure, thus the negative and positive forms can not be directly connected. The spatial distribution revealed by the applied indices refers to differences in moisture content, abundance of sand supply and relief on a regional scale. The negative forms appear in a considerable distance from each other, while the positive forms tend to cluster. Based on the spatial distribution of the forms the matrix could be described as an erosion-transportation zone, and in three accumulation zones the dune size and superimposition increases downwind.

**Keywords:** landscape metrics, aeolian sand, sand dune morphometry, dune hierarchy, Inner Somogy

### Introduction

Landscape metric is one of the most popular methods for quantitative research of landscape patches. Spatial indices describe the shape and spatial distribution of landscape features, or the connection of patches, therefore landscape dynamics can be analysed (UUEMAA, E. *et al.* 2013). The method is based on the theory of island biogeography by McARTHUR, R.H. and WILSON, E.O. (1967), however, as computers and remote sensing data became easily available, it was used in increasing number of studies (TURNER, M.G. *et al.* 2001). Easily calculated indices both in vector-based (vLATE in LANG, S. and TIEDE, D. 2003; Patch Analyst in REMPEL, R.S. *et al.* 2012) and raster (Fragstat in McGARIGAL, K. and MARKS, B. 1995) data enhanced widespread use of the method.

Mostly landscape pattern and land use changes are evaluated (SZABÓ, Sz. *et al.* 2008; TÚRI, Z. 2011; MALAVASI, M. *et al.* 2013, YE, Y. *et al.* 2015), but landscape metrics were applied in studies of landscape aesthetic (FRANK, S. *et al.* 2013), urban fragmentation (HAI, P.M. and YAMAGUCHI, Y. 2007; FAN, C. and MYINT, S. 2014), landscape planning (CSORBA, P. 2008; SZABÓ, Sz. *et al.* 2012; TURETTA, A.P.D. *et al.* 2013) and biodiversity change (NAVARRO-CERRILLO, R.M. *et al.* 2013; SCHINDLER, S. *et al.* 2015). For example, this method was used to determine that landscape pattern influences sediment dynamics and water quality (SZILASSI, P. *et al.* 2010; SU, Z.H. *et al.* 2015), and to study the possibilities of landscape boundaries determination (MEZŐSI, G. and BATA, T. 2011). ZBORAY, Z. and KEVEI-BÁRÁNY, I. (2005) and TELBISZ, T. (2011) analysed morphometric

<sup>1</sup>Department of Physical Geography and Geoinformatics, University of Szeged, H-6722 Szeged, Egyetem u. 2–6.  
E-mails: katalingy87@gmail.com, kissstimi@gmail.com

parameters of karst forms using DEM. Scale and resolution dependency and efficiency of the indices was tested (RICOTTA, C. *et al.* 2003; BUYANTUYEV, A. *et al.* 2010; MORELLI, F.F. *et al.* 2013), CRUSHMAN, S.A. *et al.* (2008) examined the individual applicability of the indices, while SZABÓ, Sz. (2009, 2011) compared the contagion type indices.

Geomorphological forms could be considered as (ir)regular shaped patches too, thus using traditional landscape metrics their shape and spatial distribution, as well as their dynamics could be analysed. The aim of the present paper is to study the geomorphological applicability of different indices studying the aeolian forms of Inner Somogy (SW Hungary). Our previous studies (KISS, T. *et al.* 2012, GYÖRGYÖVCICS, K. and KISS, T. 2013) proved that the positive and negative aeolian forms of East Inner Somogy show well-defined spatial configuration and their development is interdependent, so their spatial distribution could be described by applying particular landscape indices. Therefore the aim of the present study is to quantitatively

analyse the spatial distribution of aeolian landforms, determine the differences between the features and examine their spatial characteristics, thus to test the applicability of landscape metric indices in geomorphology. In the present study features or forms are mentioned instead of patches to emphasise the geomorphologic aspect of the research.

### Study area

Inner Somogy is located in the Carpathian Basin (Hungary), in Transdanubia, southwest of Lake Balaton. Two joint sand regions are partly divided by a wedge-shaped loess ridge. Detailed research was carried out in East Inner Somogy (its area is 1,610 km<sup>2</sup>) (Figure 1).

Faulted and vertically shifted Variscan blocks built up the substrate of the area (MAROSI, S. 1970) which are covered by Pannonian Sea and Lake sediments in various thickness (SÜMEGHY, J. 1953). The Danube and its tributaries built an alluvial fan and filled up the territory during the Pliocene or Early Pleistocene (ÁDÁM,

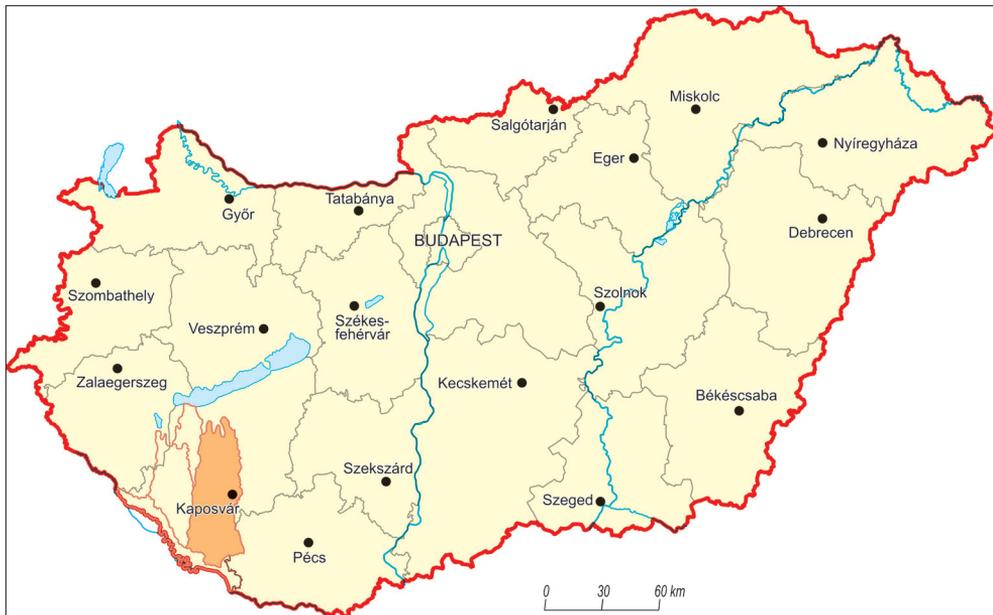


Fig. 1. Location of the study area

L. *et al.* 1981). After the Danube abandoned the region, smaller brooks kept North–South flow direction. Aeolian processes became dominant in the Würm (Weichselian glaciation) (MAROSI, S. 1970). Prevailing northerly winds reworked and sorted the fluvial sediments, thus the transported blown sand became finer southward (LÓKI, J. 1981). During the Holocene gullies and erosional valleys formed (MAROSI, S. 1970). SEBE, K. *et al.* (2011) emphasized the role of wind and described the region as a yardang-system.

A central deflation hollow and an entangled accumulation area in South Inner Somogy was described by CHOLNOKY, J. (n.d.) in the early 20<sup>th</sup> century. MAROSI, S. (1967, 1970) identified the blowout – residual ridge – hummock system and recognised dune generations, which indicated long-lasting aeolian development. LÓKI, J. (1981) revealed a complex system of dunes and ridges, and identified blowout holes, asymmetric parabolic dunes, oval-shaped and elongated hummocks. Based on optically stimulated luminescence dating aeolian activity took place in the Late Glacial, in the Boreal Phase and in historical times (KISS, T. *et al.* 2012).

Before we started the landscape metric study, we identified and classified the aeolian forms of East Inner Somogy based on their hierarchy and morphometric parameters. Five superimposed hierarchy levels were identified within the positive forms. Simple dunes are positive forms which stand by themselves and lack superimposition. Superimposed dunes appear in four hierarchy levels (level 1–4), where dunes in hierarchy level 1 create the base being the largest; whilst hierarchy level 4 dunes are located in the highest regions. Positive and negative aeolian forms were also classified according to their morphometric parameters (KISS, T. *et al.* 2012; GYÖRGYÖVICS, K. and KISS, T. 2013).

## Methods

In earlier studies (KISS, T. *et al.* 2012, GYÖRGYÖVICS, K. and KISS, T. 2013) the hierarchical and morphometric classes of positive and

negative aeolian forms were described, and these forms were used as the basic database of the landscape metric research. Metric indices were computed in ArcGIS 10 with Patch Analyst 5.1 (REMPEL, R.S. *et al.* 2012) and vLATE 2.0 (LANG, S. and TIEDE, D. 2003) extensions and certain parameters were calculated in MS Excel. The form-free area was considered as matrix, but it was not analysed in detail due to the geomorphological aspect of this research. Aeolian forms stretching behind the regional boundary were involved in the analysis with their full extent. *Table 1* contains all used indices and their definitions.

The boundary of the study area was defined based on the conventionally accepted regions of Hungary (GÓCZÁN, L. 1961; PÉCSI, M. and SOMOGYI, S. 1967). Within the study area the (morphological) zones were defined based on the dominance of the forms: superimposed positive forms dominate in the accumulation zones, while in the erosion-transportation zone (= matrix) lonely aeolian forms developed.

To analyse the distribution of the forms the study area was dissected into 1.0 km<sup>2</sup>-size hexagonal units. The landforms were converted into points, which were always located within the original form, usually close to the summit of the dune-head or in the deepest part of a negative form. Therefore, the hexagonal units did not cut through the forms, so all of them were examined just once. The hexagonal units were grouped for analysis using the Natural Breaks method, which creates groups by defining the breakpoint of the distribution curve.

## Results and discussion

### *General characteristics*

Positive forms cover 20.7 percent of the region, while negative features only 3.3 percent (*Table 2*). However, the number of negative forms is lower, as 4,404 positive and 2,911 negative features were identified. Therefore, the form density of positive forms is 2.74

Table 1. Definition of landscape indices used in this study

Landscape index	Definition
Total area (TA), km <sup>2</sup>	The area of the region or zone studied containing all studied forms and the areas without forms.
Total form area (TFA), km <sup>2</sup>	Sum of the territory of all studied forms.
Coverage, %	Sum of form areas compared to the area of the studied region/zone, TFA/TA × 100.
Number of patches (NP)	Total number of studied forms.
Form density, form/km <sup>2</sup>	Average number of forms on 1 km <sup>2</sup> of the total area, NP/TA.
Specific form number, form/km <sup>2</sup>	Average number of forms on 1 km <sup>2</sup> of the total form area, NP/TFA.
Total edge (TE), km	Sum of the perimeters of all studied forms.
Edge density, km/km <sup>2</sup>	Average perimeter on 1 km <sup>2</sup> of the total area, TE/TA.
Shape index	The perimeter of a form divided by the perimeter of the circle with the same area as the form.
Perimeter-area ratio	Perimeter/area ratio of a form.
Total volume, km <sup>3</sup>	Volume of the solid figure close to the 3D shape of the form, calculated as the third of the area multiplied by height/depth, $V = (T \times m)/3$ .
Shannon's Diversity Index	Index of form variety. The value is 0.0 if only one form is located in the study site, and it increases as classes and form distribution between classes increases.
Shannon's Evenness Index	It shows the distribution of forms between form classes. The value is 0.0 when all forms belong to one class, and it approaches 1.0 when the distribution is more even.
Dominance	It shows the dominance rate of the prevalent form-class based on area coverage.
Nearest neighbour distance, m	Distance of the nearest neighbour of a form is the length of the shortest straight line (Euclidian distance) from the boundary of the form to the closest boundary of the neighbouring form.

Table 2. Comparison of the indices of positive and negative forms

Landscape index	Positive forms		Negative forms
Total area, km <sup>2</sup>	1,610.14		
Total form area, km <sup>2</sup>	333.93		53.14
Coverage, %	20.74		3.30
Number of patches	4,404		2,911
Form density, form/km <sup>2</sup>	2.74		1.81
Specific form number, form/km <sup>2</sup>	13.19		54.78
Mean form area, km <sup>2</sup>	0.08		0.02
Form area standard deviation, km <sup>2</sup>	0.27		0.03
Total edge km	6,330.30		1,548.66
Mean form edge, km	1.44		0.53
Shape index	1.67		1.26
Perimeter-area ratio	0.03		0.05
Total volume, km <sup>3</sup>	0.85		0.02
	Morphological class	Hierarchy level	Morphological class
Shannon's Diversity Index	1.71	0.97	1.20
Shannon's Evenness Index	0.88	0.60	0.87
Dominance	0.24	0.64	0.18
Nearest neighbour distance, m	44		170
Nearest neighbour distance for classes, m	323	119	376

form/km<sup>2</sup> and of the negative ones is only 1.81 form/km<sup>2</sup>. To calculate specific form number the number of patches was divided by the total form area. This index is considerably higher for negative forms, than for positive ones, referring to many small negative features and larger and complex positive dunes. This difference in size is also expressed by the average form area, which indicates that material deflated from several smaller blowouts was deposited in one larger dune.

The standard deviation of form area is an order of magnitude higher in case of positive forms than in negative ones, which suggests that the sand eroded from small blowouts did not always built up large dunes, but in some cases it was stabilized in small forms. The total edge of positive forms is multiple of the value of negative forms due to the more complex and dissected dune shape. Mean perimeter/area ratio refers to more irregular shaped negative forms than positive ones which is a result of more elongated shape of blowouts compared to the compact-shaped dunes. However, the mean shape index, which indicates roundness, is higher for positive forms referring to more complex dune base lines than for the rounded blowout holes.

Total volume describes 3D-shape of the aeolian landforms. For the positive forms it is ca. 50-times higher than total negative form volume. The considerable difference is partly the result of the volume calculation method and partly of the development history of the forms. Errors in the volume calculation originates from (1) the error of the topographic map which is 2–3 m (DÍVÉNYI, P. 2001); (2) using cones to approach the 3D forms by considering their area and highest/deepest point; (3) automatic determination of negative forms which only includes endorheic features, however blowouts can be much larger and non-endorheic erosion areas could also develop (LÓKI, J. 1981). Moreover, the geographical reason for the large difference in volume might be (1) the erosion of inter-dune areas besides deflation from blowouts (MAROSI, S. 1970); (2) sand could had been transported from outside the region (Marosi, S. 1970);

and (3) negative forms might be partially or totally filled by younger sand movements, gelisolifluction or slope wash (LÓKI, J. 1981).

In our previous research positive forms were grouped to five hierarchy levels based on their superimposition and seven morphometric classes according to their shape (GYÖRGYÖVICS, K. and KISS, T. 2013), while negative forms were divided to four morphometric classes. Thus, diversity indices for positive landforms were calculated and analysed for both classifications. The Shannon's Diversity Index is the highest for the morphometric classes of positive forms, due to the highest number and even spatial distribution of classes. However, the negative forms has lower number of morphometric classes and the form distribution between classes is more even, therefore the diversity index is lower, though still higher than of the hierarchy levels of positive forms. Shannon's Evenness Index is the lowest for hierarchy levels, as simple dunes occur more often (almost 60%) than complex dunes.

The morphometric classes of negative and positive forms have similar values indicating even distribution between the classes, while considering class areas prominent dominance is not characteristic. Dominance values support these results. Negative form morphometric classes have the lowest dominance value referring to the most even spatial distribution, however positive morphometric class values are only slightly higher. But hierarchy levels of positive forms show strong dominance, simple dunes are more abundant.

Nearest neighbour distance describes the isolation of a form. The average value for negative forms is almost four times higher than for positives, indicating that blowouts are scattered throughout the region, they are situated far from each other and stand alone. In contrast, positive forms tend to cluster: they are close to each other, often connected or superimposed on each other. Values for hierarchy levels is slightly higher than the average as complex dunes are concentrated in the accumulation zones, therefore the nearest neighbour of the same hierarchy level might

be located in another group or in another accumulation zone. However, due to the dominance of simple dunes, hierarchy levels has lower nearest neighbour distances than of morphological classes, as simple dunes appear close to each other in rows. No morphometric class is dominant for neither positive nor negative forms, therefore members are located in larger distance, but evenly distributed throughout the region.

#### *Comparison of positive and negative landforms*

Based on the distribution of hierarchy levels, three accumulation zones could be identified where all superimposed hierarchy levels (Level 1–4) appear (Györgyövícs, K. and Kiss, T. 2013). Thus northern, central and southern accumulation zones were identified, while the rest of the region is considered as an erosion-transportation zone (also mentioned as matrix). The matrix encloses the three accumulation zones and only hierarchy level 1–3 dunes appear in it. Accumulation zones are in elevated position, and 54–67 percent of their area is covered by dunes, while this is only 16 percent for the erosion-transportation zone.

#### *Characteristic of the erosion-transportation zone (matrix)*

The area of the erosion-transport zone is nine times larger than the area of the accumulation zones, and the area of dunes located here is more than two times greater. This indicates numerous, but small size forms were built of the deflated sand (Table 3). Form density is considerably lower in the matrix than in the accumulation zones, referring to the erosion aspect of the erosion-transport zone. The coverage of positive forms is low (16%), while 83 percent of negative forms are situated here (with form density of 1.7 form/km<sup>2</sup>).

The reason for higher specific form number in the matrix, than in the accumulation zones, is the abundance of small dunes which were

quickly stabilised and became detached from large migrating forms. The mean form area is also the lowest in the erosion-transport zone (0.07 km<sup>2</sup>), however, it is only slightly higher in the accumulation zones (0.08–0.15 km<sup>2</sup>). The standard deviation of form area is very high (0.09 km<sup>2</sup>) considering the mean form area, but it is still low compared to 0.31–0.65 km<sup>2</sup> in the accumulation zones. This shows that small dunes are characteristic in the erosion-transportation zone, however, these forms are dissected and unfilled as their mean form edge is high (1.43 km). The shape index describes clearly the difference of zone characteristics, which is higher in the erosion-transportation zone, than in the accumulation zones. Only half of the transported material was deposited in the erosion-transportation zone which covers 90 percent of the region, so scattered forms stabilised during transport dominate the area creating a less vivid landscape.

The erosion-transportation zone contains only 4 dune hierarchy levels, as the most elevated hierarchy level 4 does not appear. This is presumably the result of less entangled dunes and lower degree of superimposition. Sand was transported further South, thus conditions for development of elevated hierarchy levels were not favourable. Due to the lower number of hierarchy levels diversity indices are the lowest in the erosion-transport zone. Here the low Shannon's Evenness Index for hierarchy levels along with the high dominance point to the prevalence of simple dunes. Lower ratio of entangled dunes also indicates the importance of transport processes in the matrix. Morphometric classes have higher diversity indices in all zones than hierarchy levels due to the greater number of forms. Dominance is less characteristic between morphometric classes: however widespread abundance of wing fragments and medium-size parabolic dunes also confirms intense erosion and transportation processes in the matrix. Positive forms are scattered in the erosion-transportation zone, as their average nearest neighbour distance is 52 m.

Table 3. Landscape indices for the accumulation zones and the matrix

Landscape index	Accumulation zone						Matrix	
	Northern		Central		Southern			
Total zone area, km <sup>2</sup>	48.72		11.88		103.48		1,446.05	
Total form area, km <sup>2</sup>	32.81		6.57		56.65		237.90	
Coverage, %	67.33		55.31		54.74		16.45	
Number of patches	386		64		378		3,576	
Specific form number, form/km <sup>2</sup>	11.77		9.74		6.67		15.03	
Form density, form/km <sup>2</sup>	7.92		5.39		3.65		2.47	
Mean form area, km <sup>2</sup>	0.08		0.10		0.15		0.07	
Form area standard deviation, km <sup>2</sup>	0.54		0.31		0.65		0.09	
Total edge, km	458.96		92.32		664.67		5,114.35	
Mean form edge, km	1.19		1.44		1.76		1.43	
Edge density, km/km <sup>2</sup>	9.42		7.77		6.42		3.54	
Shape index	1.62		1.58		1.62		1.68	
Perimeter/area ratio	0.05		0.03		0.03		0.03	
Total volume, km <sup>3</sup>	0.18		0.014		0.22		0.44	
	Morph. class	Hier. level	Morph. class	Hier. level	Morph. class	Hier. level	Morph. class	Hier. level
Number of classes and levels	7	5	7	4	7	5	7	4
Shannon's Diversity Index	1.41	0.97	1.60	0.87	1.34	1.05	1.65	0.64
Shannon's Evenness Index	0.73	0.60	0.82	0.62	0.69	0.65	0.85	0.46
Dominance	0.53	0.64	0.35	0.52	0.61	0.56	0.29	0.75
Nearest neighbour distance, m	7.6		16.1		15.7		52.1	
Class nearest neighbour distance, m	194	61	300	136	327	135	355	117

### Comparison of the accumulation zones

Accumulation zones cover only 10 percent of the region, however, they contain almost half (48%) of the transported material. Among the three accumulation zones, the *central zone* is the smallest, therefore it has the lowest number of forms, yet coverage and form density values are relatively high. The *southern accumulation zone* is the largest, yet the *northern zone* contains the most forms, therefore, coverage and form density are the highest here. Mean form area increases downwind (from North to South), which means that sand deposited in larger dunes in the south. But as standard deviation of form area is also the highest here, forms with different sizes appear indicating that the most entangled dunes developed in this zone, so southward migration terminated – presumably due to the nearby Drava River – and forms were stabilised.

However, due to the larger number of forms, the total form edge is higher in the southern, than in the northern accumulation zones. Mean form edge increases windward (*Figure 2, A*) indicating the formation of increasingly complex dunes during migration and as a result of several sand movement phases (KISS, T. *et al.* 2012). Edge density decreases downwind (*Figure 2, B*) referring to increased infilling of the dunes southward. The mean perimeter/area ratio shows similar trend (*Figure 2, D*), however, differences are not prominent. Despite the lower number of forms, total volume is the highest in the southern accumulation zone (*Figure 2, C*) which confirms that most of the sediment was deposited here.

In the central accumulation zone, hierarchy level 4 dunes do not appear. This is probably the result of the small area of the zone and the location of surrounding brooks (Szabási Rinya and Lábodi Rinya) which limited the

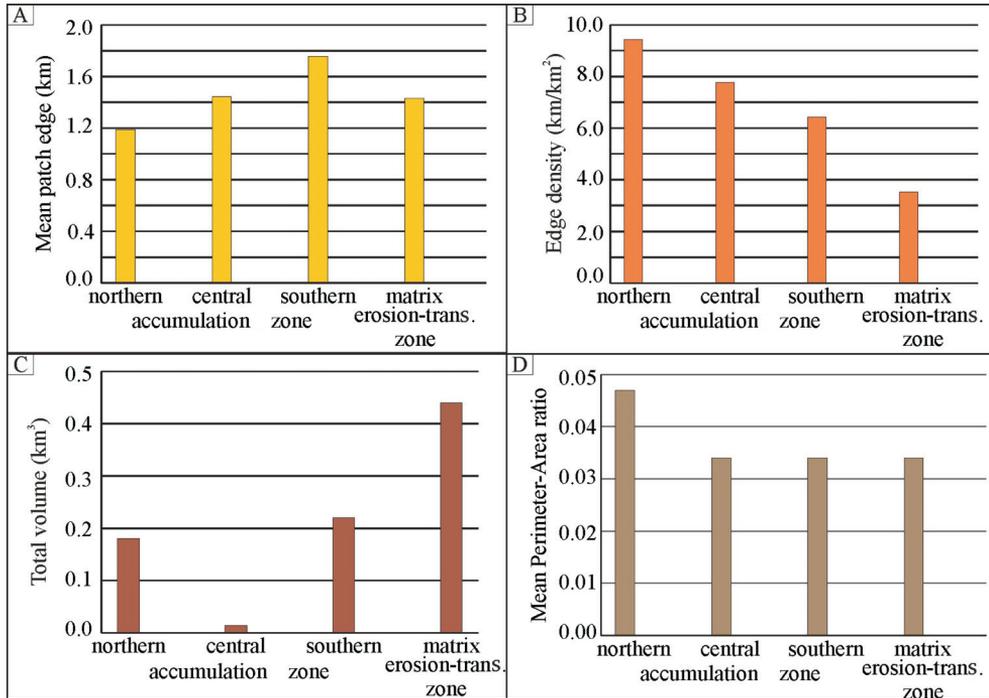


Fig. 2. Landscape indices of positive forms shows increase in the infilling (sand supply) of dunes and decrease in the complexity of their base line downwind

area of the zone. Besides, this part of the region is situated higher above sea level, therefore stronger winds are characteristic which restricted the formation of high dunes. In agreement with the lower number of hierarchy levels, diversity indices are the lowest in the central accumulation zone.

Considering the morphometric classes, the Shannon's Diversity Index is the highest in the central accumulation zone as here due to the lower number of forms form distribution is more even, while lowest diversity index in the southern accumulation zone refers to less even form distribution between classes. The reason of this is that the medium-size filled and partially filled parabolic dunes and wing fragments are abundant here, indicating that dune migration was an important process here. However, similarly high abundance of large parabolic dunes proves that significant amount of sand is stabilised in the southern accumulation zone. Shannon's

Evenness Index and dominance also confirms these findings. Considering hierarchy levels, the Shannon's Diversity Index is the highest, while Evenness Index and dominance are the lowest in the southern accumulation zone, because here all hierarchy levels appear with numerous members in all levels. The northern accumulation zone has a lower value, as hierarchy level 4 dune-class contains only one single dune and hierarchy level 3 class has only a couple of forms, while in the central accumulation zone the most elevated level (4) did not evolve at all.

Nearest neighbour distance is considerably lower in the accumulation zones than in the erosion-transport zone, as forms are entangled here and superimposed on each other resulting in the development of hierarchy levels. According to nearest neighbour distances calculated for all forms and for members of morphometric classes, dunes in the northern zone tend to cluster the most, while

forms in the central and southern zones were stabilised in a more scattered distribution. So in the windward part of the region many forms developed close to each other, while downwind entanglement decreases, during migration forms moved apart and stabilised in a scattered locations.

#### *Spatial distribution of landforms within the region*

The distribution map of the volume of positive and negative landforms reveals the locations of deflation and deposition. When hexagonal units of positive forms have low values (Figure 3, A), it indicates dunes stabilised during transportation. Entanglement is

characteristic only in the accumulation zones, where sand is concentrated in the central part. High volume occurs at the head of the northern and central accumulation zones. In the southern accumulation zone two deposition centres developed, on the eastern and on the western side of the head, while the centre is lower. This distribution corresponds (1) to the dune morphology described by LEMMAN, D.S. *et al.* (1998) where an axial low separates two summit points; and (2) and, two neighbouring large parabolic dunes could join during migration, forming a huge accumulation area, but their original morphology including the two heads are still recognisable.

Volume of the negative forms is less concentrated (Figure 3, B), so as described earlier, apart from the middle areas, sand was

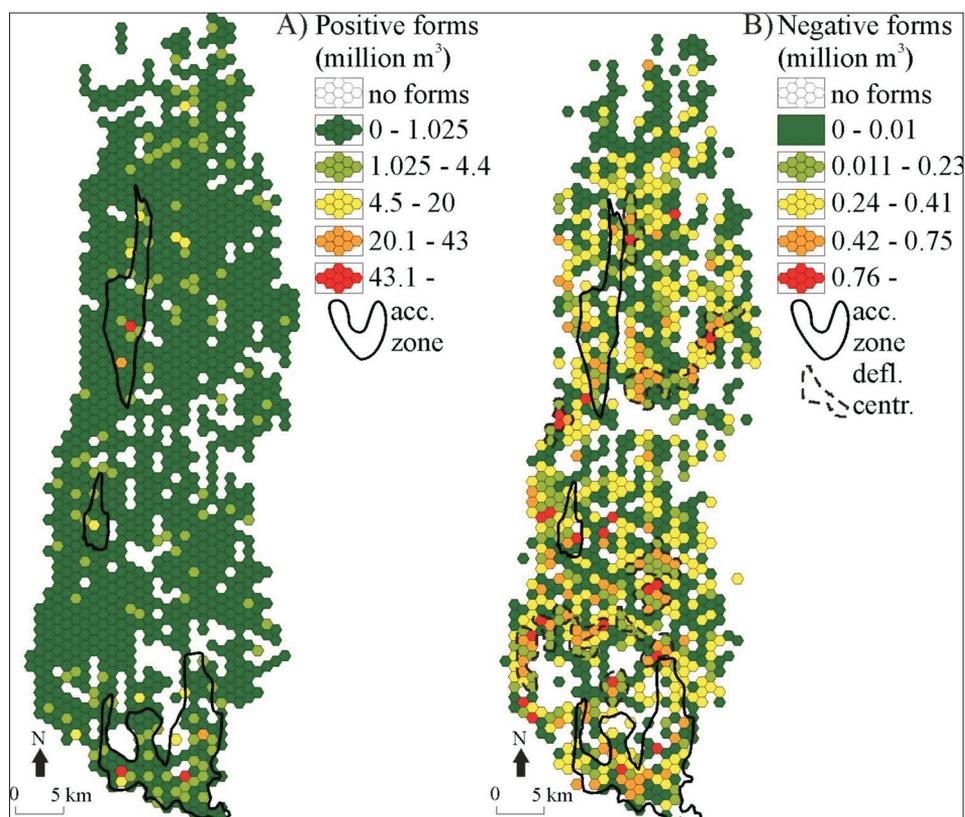


Fig. 3. Volume of the material deposited in positive forms (A), and volume of sand blown away from negative forms (B).

blown out from small patches all across the region. The northernmost part has more consolidated sand, thus deflation create many small depressions, but altogether the volume of transported sand was low, and only slowly increased southward. The number of negative forms is low in the centres of the accumulation zones; however, during the formation of the hierarchy levels many blowouts developed in the depositional areas thus a considerable volume of sand was deflated. Yet, the major part of the sand transported from blowouts was deflated from the erosion-transportation zone, where belts with varied amount of deflation are defined (deflation centres).

## Conclusions

The research has proved, that the distribution of aeolian landforms could be described applying landscape metrics, and landscape metric indices are useful to outline the accumulation or erosion zones precisely. Thus, this method could be generally used in evaluating geomorphological features, however some modifications and different interpretations had to be concerned. Some conventional landscape metric indices could not be applied. For example dunes are rarely and negative forms are never connected, therefore contagion and joint boundary type indices could not be applied in this study. Instead, nearest neighbour distance was calculated to describe the entanglement or scattering of the forms, which turned out to be a very useful parameter.

Based on the applied indices it seems, that in Inner Somogy the sand eroded from many small blowouts built up one larger dune. However, the standard deviation of form area indicates that the blown material stabilised in small positive forms at regions of higher moisture content and during low intensity sand movement periods. The shape index shows that rounded negative features are more frequent, while positive forms have more complex shape. The nearest neighbour distance

index resulted in a new insight into the development history of the area, as it indicates, that blowouts evolved in a certain distance from each other, therefore they stand alone, while entanglement is very common among positive forms which are often linked or superimposed. To calculate diversity indices, hierarchy levels and morphometric classes were considered as ecological classes. This way it was determined that simple dunes dominate the hierarchy levels, while both positive and negative forms are more evenly distributed between morphometric classes.

The coverage of positive forms is 20.7% in Inner Somogy, while this value is 24.4 percent in the Southern Nyírség (Kiss, T. 2000). This is probably because Inner Somogy received more annual precipitation, thus high moisture content of the sand limited dune formation. In the unconsolidated sand of the dry deserts coverage values are even higher, 27–90 percent (LANCASTER, N. 1995). In the contrary, positive form density is higher in Inner Somogy (2.74 form/km<sup>2</sup>), than in Nyírség (2.4 form/km<sup>2</sup> – KISS, T. 2000). This refers to smaller forms, which presumably also developed due to more consolidated sand, as higher moisture content enabled the quick stabilisation of dunes, thus wing fragments became isolated during migration.

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## Geomorphological hazards in a Mediterranean mountain environment – Example of Tétouan, Morocco

HEDVIG PROKOS<sup>1</sup>, HASNAA BABA<sup>2</sup>, DÉNES LÓCZY<sup>3</sup> and YOUNES EL KHARIM<sup>2</sup>

### Abstract

The aim of this paper is to present the geomorphological hazards affecting the city of Tétouan, Morocco. The city is one of the most important urban centres in northern Morocco. Its geographical situation is strongly determined by the fact that in the last centuries it was built on the slopes of two ranges of the Rif Mountains, the Dersa to the North and the Ghorghiz to the South. These slopes relatively abruptly rise above the valley of the river Martil. Leaving the city, the river of only 22 km length flows into the Mediterranean Sea across the relatively wide Martil Plain. Given the geographical and geological setting of this area, heavy precipitation causes several problems during the humid period (November–April). Torrential rainfalls can have devastating effects on the community. Another severe problem lies in the hazard perception by the inhabitants, who lack the necessary information on geomorphic hazards and, as a consequence, keep on building their homes on unstable hillslopes. The working group in which authors participated had the objective to prepare a comprehensive documentation to inform the population on hazards, to make people aware of the vulnerability of the environment they live in.

**Keywords:** geomorphology, precipitation, urbanisation, landslide and flood hazards, Morocco

### Introduction

In the developing world it is a common situation that unregulated urban development on mountain slopes induces major instabilities and hazards, while the local population is not aware of such problems (VERSTAPPEN, H.T. 1989; ALCÁNTARA-AYALA, I. 2002; SLAYMAKER, O. 2010). Therefore, to avoid major disasters scientific research is only the first step, the education of the population on risks is also indispensable.

Morocco is one of the most hazard-prone Maghreb country, where dry spells, floods, landslides and locust invasions regularly cause great economic damage. Parts of the country are also exposed to seismic risk: 12,000 people lost their lives in a massive

earthquake in the coastal town of Agadir in 1960. Cities and rural communities alike face the danger of sea-level rise and desertification as a result of climate change. As far as research into landslide hazards in Morocco is concerned, it has been mostly focused on seismic-induced landslides to date (HOUSSAINI, S. and BAHJ, L. 2014), but hydro-meteorological drivers are also widespread. The responsibility for disaster risk reduction lies with the Department of Environment at the Ministry of Energy, Water, Mines and Environment (MEWME), where the creation of a National Platform for Disaster Risk Reduction is coordinated (UNISDR 2012).

In September 2013 an international working group of volunteers from Europe with geography related degrees was working to-

<sup>1</sup> Earth Sciences Doctoral School, Department of Physical and Environmental Geography, University of Pécs. E-mail: hediprokos@gmail.com

<sup>2</sup> Université Abdelmalek Essaâdi, Faculté des Sciences, Tétouan, Morocco. E-mails: hasnaa.baba@gmail.com, ykharim@yahoo.fr

<sup>3</sup> Department of Physical and Environmental Geography, University of Pécs. E-mail: loczyd@gamma.ttk.pte.hu

gether with the students of the Department of Geology, University Abdelmalek Essaâdi, Faculty of Sciences, Tétouan. The aim of this cooperation was to create a document based on French methodology. In the popular document the sources of geomorphological hazards and the possible reconstructing and processes of prevention were detailed.

### Geographical setting

Tétouan is a major urban centre of the Tingitane peninsula in northern Morocco. The second most populous city after Tanger (in 2014: 463 968) and the 10<sup>th</sup> by population in Morocco, administratively it is part of the Tanger/Tétouan region.

The city is locked between the mountain ranges of the Rif Mountains, the Jbel Dersa to the north and the Jbel Ghorghiz to the south, while the hills of Ouadrassa rise in the west (KARROUCH, S. 2008) (*Figure 1*). The basin of the river Martil, where the city was built, opens to the east, towards the sea and the river val-

ley continues in the alluvial Martil Plain (COMENTALE, B. 2007; NAOUAL, O.M. et al. 2009). This part of the country is strongly influenced both by the Alboran Basin of the Mediterranean and also by the Atlantic Ocean.

Similarly to other sections of the Rif Mountains (e.g. Azzouz, O. et al. 2002), the slopes of the mountain ranges near Tétouan are relatively steep, heavy rainfalls induce rapid runoff and some quarters of the city are regularly flooded. Further problems of urban development are the lack of available space and construction licencing policy.

Originally, until the 20<sup>th</sup> century, the city spread on the foothills of the Jbel Dersa mountain range. Thereafter, urbanisation expanded onto the Martil Plain as well as onto the slopes of the Jbel Ghorghiz (CME–CMED–Campus 2013).

### Geological setting

In geological terms it spreads out on the Alboran lithospheric microplate in the Mediter-



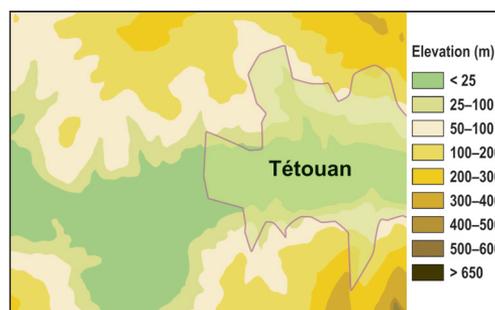
Fig. 1. Geographical setting of Tétouan. Source: InfoTerre and GoogleEarth, 2014.

anean, although is distinct from both Europe and Africa. Its stratigraphy can be related to the internal ranges of Rif Mountains as part of the Gibraltar Arc; together being part of the alpine origin Betic Cordilleras.

The prevailing surface rocks are limestone and flysch. The limestone ranges are not only important because of their susceptibility to rock fall and earthquake events, but also because they are easily dissoluble during wet periods. Further to this, the studied area belongs to the Central Calcareous Range (above 1,000 m), of which a 5 km long section is located to the north of Tétouan.

The existence of visible ancient erosional surfaces makes the Jbel Dersa differ both from other calcareous and from the mountainous ranges of the Tanger Peninsula in general (EL GHARBAOUI, A. 1986). These two residual levels can be described as follows: in the higher regions (500–550 m a.s.l.) a relatively flat plain inclining towards SE, supposedly from the Pre-Pliocene; and the other, lower-setting block (Samsa, 350 m a.s.l.) is a Late Pliocene surface disturbed by Villafranchian (MN16-17) and Quaternary processes. Similar to the Dersa Mountain, the Ghorghiz (1,237 m) also reveals some tectonic windows looking towards East.

According to the hydraulic drillings studying the upper 100 m of the basin deposits, the area is built up from Pliocene clayey-sandy deposits and Quaternary mud (BENMAKHLOUF, M. and CHALOUAN, A. 1995). The Tingitane Peninsula is dominated by mountainous landforms with several intra-mountain basins of different extension and valleys cutting through the pediments. These intra-mountain basins usually open to the Mediterranean Sea with varying width. Among others, so does the Martil Valley with its relatively wide alluvial plain. The diverse landscape comprises abrupt slopes and high relief (*Figure 2*). The prevailing limestone (in the North and South) and flysch (in the South) strata as well as the clays control the morphology and contribute to the occurrence of hazards in the region. Similarly to other basins in the Tanger-Tétouan region, an aver-



*Fig. 2.* Strait of Tétouan. A Digital Elevation Model of the western part of the Valley of Tétouan. *Source:* Modified after EGHAAZ, A. 2009 and DICRIM 2013.

age slope of 15–25° is typical for higher elevations in the internal ranges of the western Rif Mountains.

In the flat alluvial plain (slopes below 1.5°) built up of sediments transported from the mountains streams show a meandering mechanism. Quoting COMENTALE, B. (2007), the only stream able to cut through the sandy alluvium is the Martil River. In historic times, the estuary was navigable, the fact that proves the recent filling of the basin. Due to the geographical and geological settings, agriculture suffers from several circumstances. In Morocco soils are eroded to rates that extremely exceed international standards as well as the rate of pedogenesis under the Mediterranean climate (RAISSOUNI, A. *et al.* 2012). Therefore, natural vegetation only appears in traces as shrub after a significant degradation.

### Social setting

The city plays a significant role in the northern Tanger-Tétouan region since the 8<sup>th</sup> century, the beginning of the Islamic period. Today it functions as a transiting spot between the Andalusian-Spanish and the Islamic world. Its population is on the increase. In the most typical Andalusian city of Morocco the Spanish influence can be observed not only on the ancient buildings but also in the society as many inhabitants speak Spanish. Actually,

it is more widespread than the French language, which, beside the Arabic, is the official language of the Kingdom of Morocco.

The old city, the Medina, a UNESCO World Cultural Heritage site, was mostly built in the 15<sup>th</sup> century. One of the smallest, and yet best preserved old towns, it is mostly inhabited by people of local origin. It is accessible via seven gates, of which Bab Okla, which leads to the city centre, is probably the best known. The growing population has been spread out on the hillslopes of both mountains during the past, especially since 2000. Construction licences do not stop the mindless urban sprawl. As a consequence, residential development already started on hazardous slopes. In addition, people living on the plain do not have much interaction with those living on the mountain slopes and, thus, when move to the new quarter, they are not informed about the potential hazards. The lack of this information makes them build on the affected areas. A possible reason for the missing information transfer can be found in the marked segregation of the population, i.e. the lack of communication between residents in the mountainous areas and those living in the city.

In developing countries vulnerability to natural hazards is much higher than in the developed world, and the impacts of certain threats or natural hazards are more significant. Among the explanatory factors are the level of infrastructure (road network, water supply system) and the practice of town planning. Also much depends on the consciousness of inhabitants concerning the particular consequences of construction and planning activities. All of these activities are limited by the low availability of financing resources, not to mention the rapid population and urban growth.

In technical context, planning regulations and institutional frameworks are increasingly associated with the concepts of risk and sustainability, but in most countries sustainable development has only become an explicit focus of public policy within the last 10–20 years (HIGGITT, D. 2010).

### Climatic factors of flood hazard

The studied area is one of the most humid regions in the country. Rainfalls under the semi-humid Mediterranean climate with slight Atlantic influence are also influenced by the basin-like morphology next to the Mediterranean Sea. The steep slopes around the basin considerably increase the runoff in the narrow Martil Valley. Annual mean precipitation is ca. 650 mm (ranges between 650–800 mm), however, according to the Moroccan Ministry of Energy, Mines, Water and Environment it often exceeds 1,000 mm and can even reach 1,800 mm. KARROUCH, S. (2008) claims that the majority of the precipitation falls in the period from December to March. Also, referring to CHRAA, A. (2006), this period can be extended from late October to mid-February, when ca. 75 percent of the annual precipitation falls mainly in the form of torrential rains. This is the period when flood damage is concentrated.

In the Rif Mountains, due to the dominance of clayey sediments and the high relief sub-surface runoff becomes subordinate (CHRAA, A. 2006). Water saturated slopes with angles above 15° and high landslide hazard are common along the newly built road network. The length of the river Martil is only 22 km with a mean annual discharge of 19.2 m<sup>3</sup>/s (ranging from 2.75 m<sup>3</sup>/s to 47.3 m<sup>3</sup>/s). The axial river receives the cumulative water and sediment discharges that their tributary catchments provide. They are highly sensitive to variations in the relative amounts of water and sediment (LEEDER, M. *et al.* 1998), as a consequence of what the river builds a vast alluvial fan of Quaternary deposits before flows into the Mediterranean Sea. The majority of the tributaries issue from a limestone range (from 140 m to 1,090 m) close to the city (AMRAOUI, A 1988). The river has a relatively small watershed area (1,220 km<sup>2</sup>), yet the intersection of minor streams (Mhajrat, Kheims, Chekkoûr) which join to make up the Martil river form a hydrographical node of particularly high flood hazard. From the node, the discharge increases significantly,

often causing huge flooding in the city (most recently in August 2013). According to the Department of Environment at the MEWME (2013), the province of Tétouan is among those with the highest risk of inundation within the Tanger-Tétouan region, where as many as 53 flood events have been recorded in the past decade (1993–2013).

In all scenarios temperatures continue to rise worldwide, with global mean temperatures averaging plus 2 °C to 4 °C by the end of the century, accompanied by changes in the amounts and patterns of precipitation (BORGATTI, L. and SOLDATI, M. 2010). Therefore we cannot neglect the predictable changes revealed by climate models when talking about geomorphologic hazards. The quoted authors add that in the future precipitation can fall in any time of the year and with increased frequency and intensity. Particularly concerning the rainfall regime of Mediterranean area (RIANNA, G. et al. 2014), as a consequence of changes in precipitation, the main triggering factor, the extension, frequency and intensity of landslides could also modify in the near future. (The interactions between these parameters see in the chapter of results.) However, assessment of the impact of climate change on landslide is difficult, because major variations are expected on the regional scale (BUMA, J. and DEHN, M. 1998).

## Methods

The base of our prepared document was the data we have collected on field, derived from local studies as well as the data provided by the local governmental bodies. However, the amount and depth of the provided data cannot be considered sufficient. Regarding the technical part, we have supplemented our data with fieldwork in September 2013 at some of the affected sites. According to BORGATTI, L. and SOLDATI, M. (2010), there are several risk assessment, catastrophe prevention methods which can be used for a certain natural hazard in a given geographical environment.

According to the principles of zonation in the context of physical geography, zonation of a natural hazard requires the integration of primary and auxiliary causative factors, clustering of similar units, identification of dissimilar units, and the multi-level classification of mapping units (NI, J.R. et al. 2006). Furthermore, it is important to recognize the causes which trigger sudden mass movements and lead to catastrophic events, to know about past and present incidents which may help to predict, and at last to recognize the level of the hazard. This method is called *Rapid Zonation of Abrupt Mass Movement Hazard* (RZAMH). It provides a relatively complex multi-level classification system for abrupt mass movement hazards. This kind of classification also involves human impacts.

Beside RZAMH, several methods to predict soil loss erosion exist. The soil loss is caused mainly by agriculture activities. USLE (Universal Soil Loss Equation) does not involve human impacts like RZAMH, however, can predict the expected amount of soil loss. Climatic factors can be somewhat predicted and once past events are reconstructed they may help us to identify current areas prone to landslides. This landslide susceptibility modelling method was presented at the international seminar, “Journées des Géosciences de l’Environnement” transcript written by SADIKI, A. et al. 2011. Its aim in the first phase, was to “determine landslide susceptible areas based on the study of relationships between spatial distribution of past landslides and the cartographic set of landslide predisposing factors” (SADIKI, A. et al. 2011) This method, called Informative Values (VI), consists of superposing several thematic layers in a GIS database. Each of the presented layers represents a potential parameter what can trigger a landslide, ranged into classes. Landslide susceptibility occurs at the intersection of the most susceptible prone areas of each layer (*Figure 3*).

Using GIS software, the combination of the above mentioned datasets may present a thorough and accurate picture of the mass movement susceptible areas. The authors (KHALI

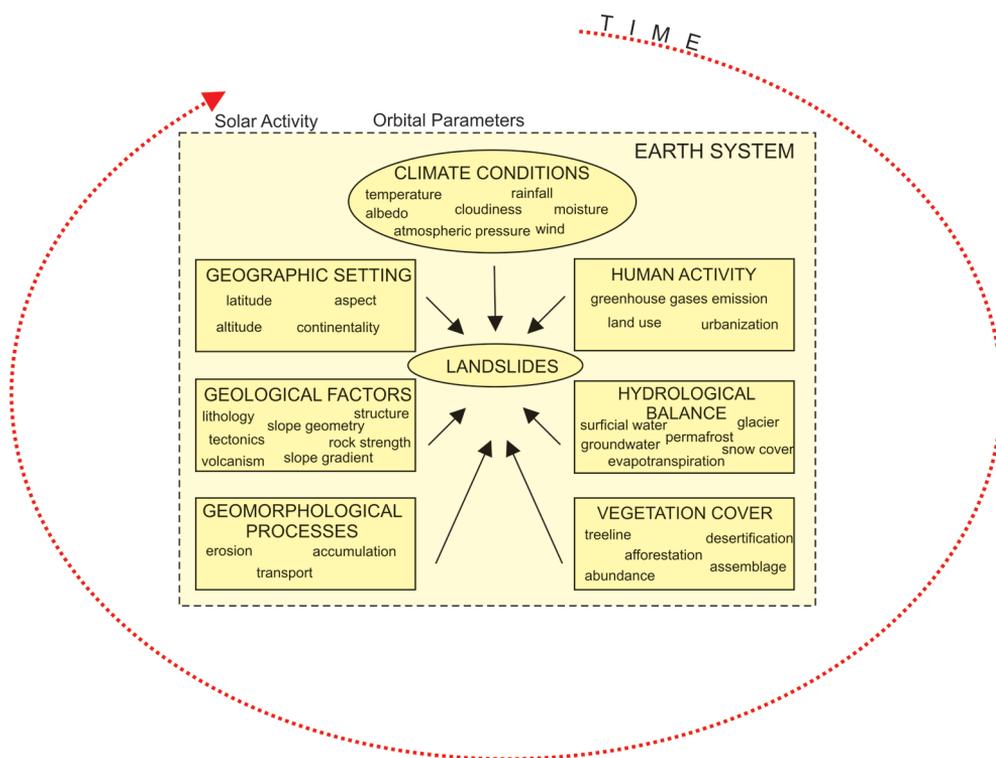


Fig. 3. Preparatory factors and triggering causes of slope instability with special emphasis on climate conditions. Source: modified after BORGATTI, L. and SOLDATI, M. 2010.

Issa, L. et al. 2014) estimated the average annual soil loss triggered by mass movements using the USLE method, and got a result of 36 t/ha/year (ranges between 12 t/ha/year and 120 t/ha/year). Their study area was the Khmiss watershed, which is situated in the northern section of the Martil watershed, as being part of the streams forming the Martil River.

The main objective of the survey of natural hazards was the compilation of a popular summary, following the example of the French *Document d'Information Communal sur les Risques Majeurs* (DICRIM), in English: *Communal Informational Paper about the Major Hazards* (Dictionnaire Environnement 2010). The government decree no. 90-918 about the DICRIM was approved on 11 October 1990. It states that the mayor has the responsibility to assess possible hazards which may affect

the community and also to create a document on them. The decree expresses that all inhabitants have the right to dispose of all the necessary information, which is of four main types:

- Knowledge on the natural and technologic hazards of the commune;
- Measuring works and/or any attempt made by the commune;
- Emergency plan in case of danger;
- Display flyers/plans about the instructions which came into force on 27 May 2003.

The affected towns/cities and land proprietors have to put out a display plan about the instructions needed, well before informing the public. These instructions are detailed in the DICRIM.

Beyond these instructions, it is the responsibility of the mayor to decide what this doc-

ument will contain. Normally, it contains the following points:

- General information on the hazard itself, whether it is natural or technological by origin;
- The state of the perception of each hazard;
- Every relevant event happened in the past within the commune;
- Preventive, protective, surveying and securing activities already made by the commune, in order to protect the people in the best way possible.

The answers to the questions represent the information the mayor can provide to the inhabitants about the commune, either permanent or temporary. These are the questions what need to be answered by everyone – either individual, business managers, or institution representatives (of communal or parental use) – for their own security in case of danger. The last part “what do I have to do to limit the consequences of risk?” shows the importance of sharing the current status of hazards between authorities and population. The political success of natural risk prevention will obviously be a social success for each participant of the commune, too. Thus, this requires both consciousness and capability to reduce vulnerability from the part of the individuals.

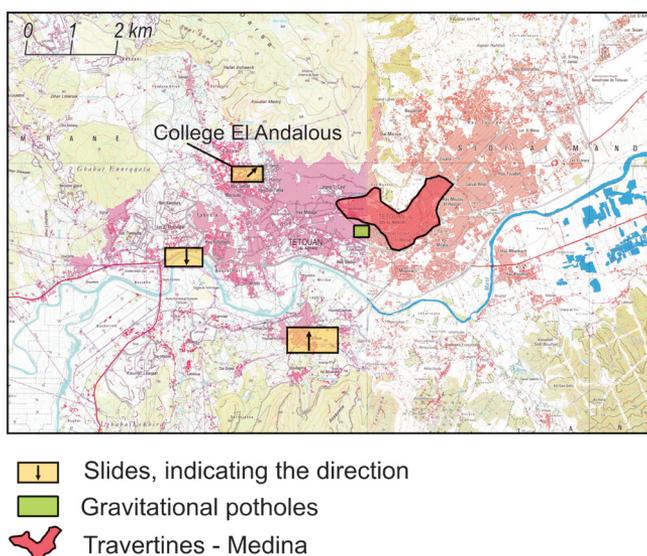
## Results and discussion

Due to its geographical and geological setting, people living in Tétouan are exposed to multiple hazards. The most severe of them are landslides, therefore, an amount of about 50 percent of the budget designated for public reconstruction works is dedicated for mitigation works in the area of Tétouan and Chefchaouen. It concerns especially the main roads. According to a recent study from the

province of Chefchaouen (MASTERE, M. *et al.* 2013) 45 percent of gravitational movements (landslides included) occur on agricultural land and 26 percent of them under dense forest coverage. Within the group of mass movements, landslides and land subsidence caused by undermining are the most common hazards regardless of soil coverage type. The old city centre protected by wall, the Medina, was built upon travertines, therefore, the hazard of pothole collapse is relatively high. In case of risk or vulnerability, the parameters shown in *Figure 4* are relevant for the prediction of disasters.

As it is shown in *Figure 4*, the whole area is affected by several, in some parts by multiple hazards, mainly concentrated in the western districts. A simple table provided by the authorities of the community lists the affected areas, whereas it is well visible that both rural and urban areas are affected (*Table 1*).

The spatial distribution of landslide hazard is closely associated with the distribution of travertines, which is mostly limited to the area of the Medina. According to CHRAA, A. (2006), quoting EL GHARBAOUI, A. (1981), the Tingitane Peninsula geomorphologically can be classified into the following categories:



*Fig. 4.* The localization of some of the natural hazards affecting the city of Tétouan. *Source:* BABA, H. and PROKOS, H. 2013.

Table 1. Landslide affected sites in the community area of Tétouan, 2004.

Zone		Sites under risk	Village
Urban		<ul style="list-style-type: none"> <li>– Kourrat Sbaa</li> <li>– Khandak Zarbouh</li> <li>– Koudiat El Hamd</li> <li>– Along the Oued Samsa</li> <li>– Bouenan</li> <li>– Bou Semlal</li> <li>– Zkiek</li> </ul>	
Rural	Rural community	<ul style="list-style-type: none"> <li>– Al Alyeene</li> <li>– Onsar</li> <li>– Ajiibech</li> <li>– Tayenza</li> <li>– Ikhalfin</li> </ul>	<ul style="list-style-type: none"> <li>– Alyeene</li> <li>– Mallaleene</li> <li>– Seddina</li> <li>– Beni laït</li> <li>– Beni Said</li> </ul>
	Routes	In the neighbourhood of dam Nakhla	
		<ul style="list-style-type: none"> <li>– National route n.2 from Spirada to Lhilah.</li> <li>– Regional route n.417 (between PK 8+500 and PK 17+380).</li> <li>– Regional route n.414.</li> <li>– Provincial route no.47 02 (route Beni Idder).</li> <li>– Third-class route going to Jbel Ghorgiz.</li> <li>– At some parts along the route in direction of Ken Karrich until the community border of the town of Chefchaouen</li> </ul>	

- erosional basins with low hills within the mountain foreland;
- limestone-dolomite foreland with gentle slopes to the South of Tétouan and ranges of subvertical carbonate strata of the Haouz mountain range (highly prone to landslides).

The mass movements observed may be separated into *slow, mostly continuous movements* and *rapid episodic movements*.

#### A) *Slow, mostly continuous movements*

a) *Landslides*. As mentioned earlier, landslides are the most common type of hazard in the Tanger-Tétouan region. This is due to the common occurrence of clayey beds, the geological setting and the torrential floods following heavy rainfall events. Inactive shear planes reactivated by anthropic effect should also be noted.

Example 1: *Korrat Sbae*. A continuously renewed unstable slope causing many problems for constructions and for the main road with the same name. Induced by both natural and anthropic processes (leaking sewer system and lack of subsurface canalisa-

tion), deep-seated rotational landslides occur. According to a survey made in 2008, 2 percent of the buildings collapsed, 7 percent considerably and 12 percent moderately affected by the slides (*Photos 1–4*).

Example 2: *Taboula, Road no. 2*. Close to Korrat Sbae, this slide is situated in the cemetery. It is less deep, but is active in almost every year. Retreating gradually in spite of restoration works, it causes constant trouble to the authorities. The municipality is planning to build a protective wall.

b) *Collapse*. Processes normally caused by loading or water pumping, but may occur also as a consequence of subsurface dislocation of matter. Most commonly affects densely built areas, where soft and plastic soil (e.g. clay) can be found. As an example the collapse at Onsar au Haouz in 1946 can be cited after which event the village had to be evacuated.

c) *Piping – subsurface changes in volume of matter caused by swelling and shrinking of clays*. This process normally works at the points where single-story buildings join each other. It is due to the low weight and rigid parameters of clay (BABA, H. et al. 2013). A lack of geotechnical preventive measures must be



Photo 1. Consequences of landslides in Korrat Sbae before terrain management, 2012. Source: Faculty of Sciences, Tétouan, 2012.



Photo 2. Areas prone to landslides in Korrat Sbae. Source: Faculty of Sciences, Tétouan, 2012.



*Photo 3. Protective wall between the road and the slope after landscaping (10 x 10 m). (Photo by Prokos, H. 2013)*



*Photo 4. Korrat Sbae after landscaping (Photo by Prokos, H. 2013)*

noted. The geological structure of the basin provides good permeability in the upper sandy-silty layers, hence the actual abundance of rainwater varies in the low-lying flat areas with the weather situation.

#### B) Rapid episodic movements

a) *Rockfalls, topples.* Affects mainly the steep slopes of the limestone range, thus means a potential hazard for the land properties found close to these slopes, in foothill areas. Such movements are relatively rare, but still happen time to time. As an example, this block of rock ca. 4 m high rolled down into Bouanan, 3 km to the South of Tétouan, in 1993.

b) *Gravitational potholes.* Due to lack of geotechnical measurements, the presence of underground cavities under the travertine-based Medina (*Photo 5*) and El Ensanche districts is only an assumption (BABA, H. et al. 2013). However, events that happened in

recent years tend to prove that underground cavities exist. An example to support this is the pothole collapse in 1990 on the Moulay El Mahdi Square.

#### Conclusions

The geographical setting and the geological structure detailed above reflect a relatively varied relief. In addition, to this come unbalanced, extreme rainfall events due to the region's climatic situation. Examples brought from MASTERE, M. et al. 2013, only indicated to show that the whole area has a somewhat hazardous geological setting with its susceptibility to flood hazards and mass movements. However, the comparison with the region of Chefchaouen (see MASTERE, M. et al. 2013) and the region of Bab Mrouj (see ABDELLATIF, T. 1997) shows that Tétouan is in a much more hazardous situation.



Photo 5. Houses built on travertines in the downtown. Source: Faculty of Sciences, Tétouan, 2013.

As soil coverage in accordance with geological features and land use percentages are similar in the Rif regions, the explanation should lie in other factors e.g. anthropogenic, besides geologic. According to HIGGITT, D. (2010), increased vulnerability can be explained not only by environmentally-geomorphological factors, but also by the lifestyle of the society, the increasing numbers of population who tend to live in areas with mass movement hazard.

The complexity of this problem lies in the fact that geomorphological hazards extend over agricultural land which badly affects the economic status of the sector. Decision-making tools such as detailed geomorphological-geological mapping and an effective distribution of information are needed. Attempts have been made to restore and protect structures in these areas, although they are not supposed to suffice in the future.

Although, several projects have already been dedicated to target this problem, population growth and urbanisation is set to continue at higher rates and the municipalities are not yet properly prepared for the predictable consequences. In addition to applying tools like construction licences and restrictions, the affected areas should undergo professional surveys to reveal environmental conditions comprehensively. As the city is among the most developed urban centres in the region, all efforts will be made to mitigate the hazards in the near future.

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# Geography in Visegrad and Neighbour Countries

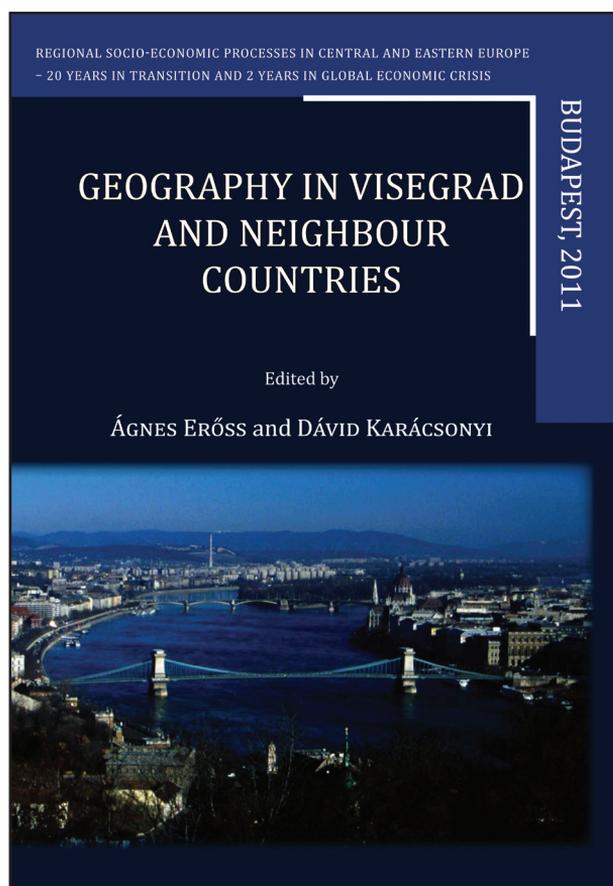
Regional Socio-Economic Processes in Central and Eastern Europe –  
20 Years in Transition and 2 Years in Global Economic Crisis

Edited by  
**ÁGNES ERŐSS and DÁVID KARÁCSONYI**

*Geographical Research Institute Hungarian Academy of Sciences  
Budapest, 2011. 169 p.*

During the last twenty years the erstwhile Soviet bloc countries in Central and Eastern Europe (CEE) have taken distinct routes in post-socialist development, wherein the national trends and internal regional processes proved to be in deep contrast. Responses to the challenges of the global economic crisis also varied, repeatedly brought to the surface long

existing regional issues, structural problems and ethnic conflicts. Human geographers are divided in the assessment of the shifts that occurred during the past twenty years and the exchange of experience is vital for finding adequate answers to the new challenges. In order to provide a forum for discussion the Geographical Research Institute Hungarian Academy of Sciences with the generous support of the International Visegrad Fund Small Grant Programme organized a conference in order to induce the revival of contact between the institutes of geography of Visegrad Countries and their Western and Eastern neighbours. Present volume is a selection of presentations aiming to provide a deeper insight in socio-economic processes and their



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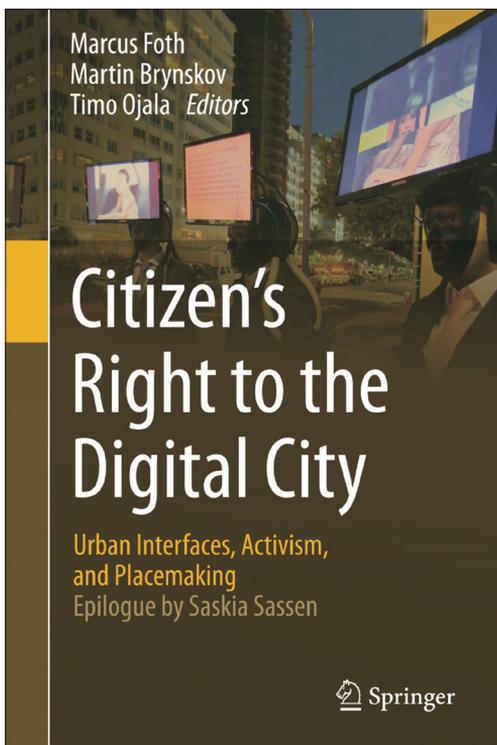
## BOOK REVIEW

Foth, M., Brynskov, M. and Ojala, T. (eds.): *Citizens's Right to the Digital City: Urban Interfaces, Activism and Placemaking*. Dordrecht, Springer, 2015. 259 p.

Since the World Wide Web was launched, a lot has happened in the everyday life of the people. More and more of us have had access to the latest information and reach friends or establish business via internet and social media. No doubt, this has dramatically changed the traditional interactions of people. As an urban trend, in the last decades the need for urban public spaces for spontaneous public life and involvement with the environment have increased due to the decrease of space, especially greenspace, resulting from phenomena such as fast urbanisation and privatisation of spaces. In consequence, and as potential solution to the problem, new virtual and digital spaces are created as public spaces thanks to the development of ICT. Whether it will be successful or not is still uncertain. Public space has new senses and meanings. It is not only a physical place but more like a virtual platform, which provides space for

interactions formerly taking place in physical, material form. The changing dynamics of urban activities and lifestyles as well as the use of public spaces have been becoming more and more important in urban context. For this reason researchers have increasingly been focusing on the new interfaces and platforms of urban changes, which have not altered a lot in meaning, but more in their manifestation. Claiming equal rights for every citizen not only in 'real' material life but in the digital world as well has justifiably become a main issue, what has strong influence on public participation methods and the ways of urban planning and development.

The world of internet seems to be equal and democratic, providing the freedom of speech to everyone, while disadvantages are less articulated. Optimised and safe places are created which are claimed to be accessible for everyone, but actually only if certain preconditions, such as sufficient internet connection, are given. This creates a digital divide between various groups of various societies. Moreover, the networks which we are constantly getting connected to are algorithm-based, and they are filtered by the network-operators according to our search history or temporarily saved internet files. So the information we receive is essentially modified. Therefore the real decision-making is neither in the hands of the people, nor in the hands of politicians, but, in several cases, in those of companies, which make recommendations on what is relevant and important for the people in order to create clicks and site visits, and actually profit. The owner, may it be a political actor, an enterprise or a civil movement, has the right to exclude someone from the created virtual place, what means that they own a public and collective place, which is digitally existing and nowadays used in a similar way as 'material public spaces' were before. This creates inequality in the digital world. So while people are using digital platforms to interact and live public life, exclusion and unequal access to the space and the city still exist in the digital world just as they did before in material public spaces. The shift to using digital spaces instead of material ones has not resulted in many changes in terms of which groups are excluded, either. They are more or less the same as they were before. In light of these processes the book suggests that HARVEY's concept on the production of space and LEFEBVRE's theory on the right to the city



should be rethought and adapted to the digital world to help remedy inequalities. One of the main aims is to highlight and demonstrate the technology-created and recently highly debated forms of injustice and inequality and to offer alternative solutions for eliminating the mentioned unjust situations by using various modes of ICT.

The book has three main editors and 28 contributors, what enables a broad insight into the various aspects of how an increasingly digitalised world influences the everyday life of the city and its citizens. As the seventh volume of the 'Digital Cities Series', the anthology, not breaking with traditions, embraces peer-reviewed publications from the Digital Cities Workshop. The workshop was established in 1999 in order to answer the challenges of the ICT boom. Since then a vast amount of papers has been published on urban informatics. This book is one of the newest ones.

The book is an interdisciplinary work, which brings urban planning and urbanisation, IT-development and informatics, financial issues and economics under the umbrella of spatial theory and geography. The authors are opinion leaders in the topic of urban informatics and urban interaction design with various research topics embracing urban futures, social media, food and digital security, community engagement and development, sociotechnical innovation, environmental and urban sustainability, creative social entrepreneurship, and city networks.

Marcus FORTH, one of the editors and founder of the Urban Informatics Research Lab in Brisbane has great experience in researching human-computer relations. In his works he applies informatics in order to understand urban changes caused by technology (e.g. FORTH, M. 2009, 2014). Martin BRYNSKOV from the Aarhus University in Denmark is member of the Participatory IT Centre and Digital Design Lab and the founder of the 'Smart Aarhus'. 'Smart Aarhus' is a laboratory conducting digital urban research aimed at improving urban life by testing smart investments and facilities. It involves people, local governments and the private sector, and tends to establish collaboration between cities as well to promote sustainability. BRYNSKOV's main research interests are digital urban living and architecture and the adaptation of digital architectural elements in urban planning. Timo OJALA is leader of the Urban Computing and Culture research group in Oulu, Finland. OJALA participated in several multidisciplinary projects focusing on personal urban interactions and ICT related changes. His main research fields include the digital city and hybrid (virtual and real world) reality.

The volume presents different viewpoints and aspects on urban informatics and digital urbanism, what makes it a useful handbook with its thirteen individual but connected chapters for geographers, sociologists, economists and urbanists, who are working in ICT-

based urban development and design. The book not only proves and approves the importance of Smart City concepts and projects but extends the idea with a new aspect replying to the critics of smart development, who consider the concept too technocratic and insensitive to the interests of society and community. The authors present current trends, tools and platforms in ICT and their adoption in everyday life and routine, and also in urban place use practices. The technology-based aspect gives practical insight for the reader. In the meantime authors present theories and policy patterns as well through in-depth case studies.

The first chapter focuses on technology-driven changes in the use of urban public space and the flow of products, people and capital within the cities. It accepts and rethinks Jan GEHL's idea about places and activities. Here the activities of people in public urban places are categorised as necessary, optional and social activities, but GEHL does not calculate with the new digital activities as option. Digital activities sometime connect the 'original activities' of GEHL and connect them. In the digital city people are doing not just necessary activities. A typical example is waiting, during which people can also contact with their friends, family or business partners, and establish social activity through their mobile devices. There is a declining trend in the public activities in public spaces described by GEHL in his seminal work. Yet, in the meantime social activity taking place in digital public spaces is on the rise. This shift often causes some misunderstandings in research about public space, since the relocation of activities from the physical world to the digital world makes the original categories permeable and hard to measure.

The authors introduce new alternatives and methods aimed at stopping the constant decrease of public activities in public spaces, which is due to the spread of digital devices. In the chapter 'Digital Design Interventions for Creating New Presentation of Self in Public Urban Places' by SEEBURGER, J. *et al.* interesting ideas and new programmes are presented which help through digital access to apps and softwares in avoiding that material public spaces lose their function. On *Capital Music* and *YourScreen* people can anonymously share music and video with each other. *PlaceTagz* enables people to tag visited public spaces and post their experiences, similarly to the Japanese *Keita mizu* place-specific game, which uses photos taken by the mobile phone cameras to identify places. These programmes have a lot in common with the newly released *PokémonGO*, which has created new practices in urban public spaces, but has also generated worldwide debates. The authors underline that these apps can increase the 'urban experience' by enabling people to live the public spaces, which in their traditional form have become dull and boring for the younger generations, as eventful and exciting places full of content. A tree becomes a niche for Pokémons,

a statue with a QR code becomes a place with message. The mentioned apps and similar ones can make people interact more or find hidden beauties of the cities. Moreover, these programs make aware both the public and policy-makers and entrepreneurs that cityscape can be understood in many different ways, in form of pictures, videos, sounds or noise, and they can help people get in touch along commonly perceived and similarly lived situations.

All senses play an important role in better understanding the cities, but visual experiences are undoubtedly considered as the most important impressions for the majority of the people. Technology has reformed building facades since the early 20<sup>th</sup> century by placing neon lights on them. As BEHRENS, M. *et al.* state in the chapter 'Designing Media Architectural Interfaces for Interactions in Urban Spaces' digital technologies are now embedded in the cityscapes, as is well exemplified by Times Square in New York or Federation Square in Melbourne. Beyond bringing forth architectural renewal, these changes also raise debate about Human-Computer Interactions (HCI) given that public displays have become highly incorporated in the built environment. These digital screens serve multiple purposes. They can be used in place-marketing and advertisement, to help people adapt information, and might prove fundamental as architectural building component. The question may emerge whether these screens can be used as cultural intermediaries, as a specific mode of interaction, or as a platform for civic participation or resistance. The book also suggests new steps and strategies in implementing these technologies in urban design and planning to avoid worst practices, and to create more successful and more equal urban development for the excluded groups as well. As MELGAÇO, L. *et al.* show in the chapter 'Case Study of a Rural Brazilian Community', the expression of opinion can be empowered by digital devices. Still, long-term management is needed to enable people through these new techniques to use public spaces or tell their opinion. The VEIV programme in London and the SCSD in São Paulo let people engage with newly implemented projects and comment them. Public spaces are not only physical sites of activities, but sites of awareness and action too. Through the new interfaces mediated by the new digital architectural components people can be better and more equally informed about urban development and planning.

In the last decades urban policy has significantly changed due to these processes. The notion of smart cities has become essential in urban planning and design, especially in the Western countries. Besides, more and more countries in the Global South are developing and realising their own smart city concepts. Adapting technology in urban life helps to make cities greener and more sustainable, and to connect citizens with the city in new ways and on new platforms, like e-governance, information flow or e-commerce.

After the first main focus which was about urban interactions and new interfaces for that, the second major focus of the book is on the citizens' action which can be articulated by using ICT. The chapters in this part highlight three main components of the technical agency necessary for citizen action. These are power, knowledge and appropriate occasion. The latter means those circumstances and spatial settings, when and where knowledge and power stands together and both are ready to be used for urban changes. As it was described above, the spread of ICT does not cure that marginalised groups are often excluded from the flow of information and, hence, from decision-making. In some extreme cases powerful actors consciously exploit this sort of social disparity, resulting in that technological development is rather intensifying social struggle. For this reason, technology-driven social inequity should be treated as policy issue as well.

The volume presents a case study in Cape Town, South Africa, where technology is used to promote social justice through community based action. The distribution of infrastructure and (social) services is highly unequal due to the historical heritage of the apartheid system. The digital divide shows similar patterns, strongly correlated with racial, gender, education and age differences. Researchers started a digital campaign to underline that community activism can never be just digital. Other types of activism, including informal or interactive, must also be involved. Digital activism can surely help people use basic services for which they have constitutional rights, but, in practice, no actual access as the chapter 'From the Fringes: South Africa's Smart Township Citizens' from MITCHELL, H. *et al.* presents. It is worth noting that in the East Central European (ECE) region there are also initiatives to increasingly use digital devices in order to help people, but a complex program like the one in South Africa has not been launched yet.

To foster such progressive trends, smart cities should be opened up for people and thus become sociable smart cities. The key is to extend public-private partnerships with 'people', and promote PPPPs by making data accessible for a broad public and enabling meaningful involvement in development. The authors also envisage the sociable smart city, which means that cooperative designing and/or planning and research are connected to, and the cooperation of people and other stakeholders are essential parts of, planning and policy making processes, not only in the beginning, but also in later phases. The authors highlight the importance of monitoring and benchmarking as well. This notion is based on the Participatory Action Research (PAR) approach, which is becoming more and more common in Western societies, although also fuelling debates in the ECE region. The strategy of the PAR is to democratise decision-making and link it to real community needs.

In order to improve problem-solving, it implements the 'learning through involvement' method, which helps to increase human resource capacities. In East Central Europe the transition opened the floor for rapid privatisation and economic deregulation, which resulted in many PPP projects with a lot of unexpected outcomes leading to intensive political debates. Corruption was also broadly claimed to be a concomitant of these kinds of partnerships. As another burden, throughout the socialist times there was hardly any space for civil initiatives and cooperation. This legacy will presumably hinder the evolution of socially extended PPPs in East Central Europe.

Technology has become a basic issue policies address, what has several advantages, but many disadvantages as well. In many terms it does not close the gap between various social groups. Technology and open data have always played an important part in military strategies, national security issues, mass communication and propaganda. The book presents a Brazilian case study about how technology is used by the political power to hinder grassroots initiatives or civil resistance. Lea REKOV discusses the process of empowerment through media in the chapter 'Police, Protests, and Policy in Rio de Janeiro—Mega-Events, Networked Culture, and the Right to the City'. In fact, digital deprivation of people is not a unique issue in Brazil, but increasingly a global one. National governments are taking steps to regulate digital liberty and use cyber-monitoring in order to 'guarantee law and order', which might constrain human rights in pseudo-authoritarian ways, even in cases the majority of society does not regard this as justified. Digital protest and empowerment is also connected to the Arab Spring which, in the book, is partly stated as a good example for empowering people. It is still questionable whether protest and resistance against a regime or an event through digital interfaces can work at all, or will be able to work successfully in the long term in the ECE region. Some examples show that social and mass media campaigns where political parties and organisations try to mobilise their voters often prove less efficient than expected (LAU, R.R. and POMPER, G.M. 2004; VERGNE, C. 2009).

The third part of the book discusses democratic and participation-based forms of city-making processes. The knowledge, time and money of the people often help to contribute in urban improvement and development, may it be local or global scale. The authors investigate whether urban development can be fostered by participatory budgeting (PB) in a world where crowdfunding and crowdsourcing have become everyday phenomena. Also in the ECE region several crowdfunding pages appeared, which can be useful for small-scale and community-led neighbourhood developments and urban renewal.

Democratic decision-making is impossible without sufficient access to information and organising

debates about which strategies people prioritise in public issues. These are essential prerequisites for making feasible proposals, which then should be evaluated and voted about on basis of participation and planning in the same time, usually referred to as co-design. The book presents case studies and analyses on open government and participatory budgeting and discusses the pros and cons of actually implemented projects. Such projects have several challenges, among which the book highlights some major issues. Politicians have a fear of losing power in case they involve people in the decision-making process. It is hard to define which data should be open. Security, privacy and copyright issues involve legal challenges. Applying ICT in planning and design demands resources, such as human resources (e.g. knowledge and free time), infrastructure and sufficient funding. This is often a bottleneck in East Central Europe, because if financing is reliant on local and national authorities, it often falls short from what the project would actually necessitate. The lack of funding also can hinder IT-based participatory planning. The authors come to the conclusion that in a democratic country people want to be involved in planning from the very beginning without being asked whether they want to do so. Several issues are identified concerning participatory budgeting (STORTONE, S. *et al.*), data-based value-added city services (ILHAN, A. *et al.*) and community-building frameworks (MCGINLEY, T. *et al.*), as well as several goals to achieve, like commonly funded public developments, rational and efficient data-use or co-design supported by diverse groups of stakeholders. There is a need to have common ideas and find solutions providing the most for all stakeholders.

In the epilogue Saskia Sassen addresses how technology has increasingly becoming urbanised, and how new, digital, cities have appeared. ICT can make cities outlive and overgrow companies and even nation-states in terms of power and technology. Since the cities are in constant change and, therefore, in a 'permanent beta' state of using IT language, there is a perpetual need for change and innovation. Rapid shifts can also lead to fast fall, however, in case of lack of innovation and ability for adaptation. So the new type of city, the digital city must be paid attention to by all participants. Sassen emphasises that we shall not forget that although the city is often adaptive, but sometimes it is resistant, since it is the residence of people with diverse individual goals, ideas and preferences. The precondition for open-source and participatory urban informatics is that DIY and grassroots movements are fostered by focused policies. Hardware cannot work without software. Both are needed for proper operation. Sassen underlines the need for technology resulting from social activity within the city. Metaphorically, the city and its built environment can be considered as the hardware, and

the people and their practices, such as the use of ICT and innovation, as the software. Until we do privilege technology over people and cannot find the balance how to create not only Smart, but Sociable Smart Cities, ICT and cities as software and hardware will not be cooperating fruitfully.

Considering the long-existing social, political and economic disparities between the global economic core formed by developed countries and the relatively newly emerged democracies in East Central Europe, the outcome of adapting urban informatics in the latter is doubtful. Firstly, the current digital divide can increase, since software and hardware necessities cannot be fulfilled by deprived and disadvantaged groups in terms of socio-economic status. Secondly, there is a lack of adequate education and training in the ICT sector, and language proficiency is not always sufficient for adapting innovations, especially in lower status groups. Thirdly, digital freedom is decreasing in some Eastern countries, and there is growing control over the internet and the use of digital devices. In case these tendencies are not cured, the divide between East and West cannot be reduced. The wealthier and more powerful groups, like upper class and upper middle class people will be closing the gap, while the poor and deprived will become more and more excluded. The other scenario is that digital inclusiveness will be reached. This is possible, however, only in case of full engagement of all actors.

The book gives helpful and operative examples, not only for developed, but also for developing countries, which in certain cases and in certain respect are much similar to East Central European ones. The book is a 'serial key' to the knowledge and the software. The question is whether East Central European countries can adapt it to their hardware.

GYULA NAGY<sup>1</sup>

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<sup>1</sup> University of Szeged, Szeged, Hungary.  
E-mail: [geo.nagy.gyula@gmail.com](mailto:geo.nagy.gyula@gmail.com)

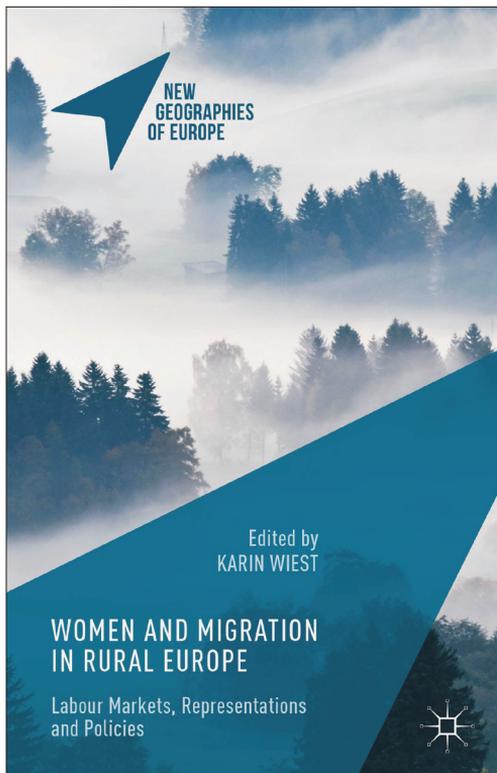
**Wiest, K. (ed.): Women and Migration in Rural Europe: Labour Markets, Representations and Policies.** Basingstoke, Palgrave Macmillan, 2016. 257 p.

In recent years, there is a growing interest among policy-makers and academic scholars in the research on the relationship between gender and 'the rural'. On the one hand, gender relations and the potential role of women in development have gained significant attention in rural policies of the European Union over the last decades (e.g. European Commission 2000, 2012, 2016). On the other hand, due to the so-called cultural turn research on gender, sexuality and other dimensions of 'otherness' have come to the forefront of the research agenda of rural studies (see e.g. PHILO, C. 1992; CLOKE, P. 1997; CLOKE, P. and LITTLE, J. 1997; LITTLE, J. 2002; LITTLE, J. and PANELLI, R. 2003; WOODS, M. 2010). After a long time of neglect, there is an increasing fascination with the gender aspects of rural migration, well-reflected by the expansion of the relevant international literature (e.g. BOCK, B.B. 2006, 2010; BONIFACIO, G.T. 2013). Results of these studies show that despite increasing attention to gender issues, rural women still have to face serious disadvantages, compared not only to rural men, but also to urban women, what underscores

the importance of further research on this issue. The book to be introduced fits well in these trends, and it is a valuable contribution to current debates on gender and rural migration.

The 257-page-long book consists of 12 chapters. The first one introduces the collection, setting the conceptual framework and principal aims of the book. As the editor, Karin Wiest, senior lecturer and project manager at the Leibniz Institut für Länderkunde (IfL) in Leipzig, points out, "...this volume aims to shed light on the diversity of female living conditions and female migration decisions in the European countryside, with a particular focus on the question of how women deal with restrictive conditions in rural labour markets" (p. 6). In addition, throughout the book, particular attention is paid to the question what it means to be a rural woman in contemporary postmodern societies, and policy aspects of gender issues are discussed respectively. The editor also provides an overview on the topics covered by this volume, and places the main findings of the contributors into these debates. The themes include the possible explanations of women's migration, the characteristics of European rural labour markets from a gendered perspective, the gendered representations of rurality, and the relationship between gendered migration and rural development.

For Wiest, the contemporary transformation of rural areas serves as a starting point for discussing gendered rural migration. In fact, rural areas are constantly changing under globalisation and concomitant phenomena (e.g. economic restructuring, environmental changes, the expansion of information technology), what is a multi-faceted process. On the one hand, the material conditions of rural life have been undergoing a profound change due to the transition of labour market from a traditional to a post-Fordist type, resulting in various new employment opportunities for women. On the other hand, dominant social and personal representations of the rural are also shifting, coupled with the re-negotiation and re-interpretation of rural life and rural man- and womanhood, producing alternative or new femininities and masculinities. These two facets, the material and the representational ones, play a key role, since both 'real' as well as perceived economic and social structures affect women's quality of life and migration behaviour. As a consequence, European rural areas can be characterised by a gender-selective migration, since the number of women leaving rural areas exceeds the number of male out-migrants. This process results in severe demographic imbalances between and within regions, and hampers the solid economic and social development of rural areas. Therefore, adequate poli-



cy measures are needed to tackle such challenges, and authors of this volume try to make their part adopting a strong policy focus.

The rest of the book is divided into three main parts. The first part introduces four case studies from Spain, Germany, Hungary/Romania and Poland that focus on gendered representations and perceptions of the rural and pay particular attention to the inter-connections between women's evaluation of rural life, their personal identities and mobility. The case studies offer an insight into the processes of rural transformation outlined above. For instance, it can be observed in women's narratives how post-Fordism, postmodernism and the altering material and social realities of the rural destabilise traditional categories, such as the urban-rural divide, rural lifestyle or gender roles. At the same time, the persistence of stereotypical beliefs about rurality and female duties is palpable in the stories and positionalities of surveyed women. Mobility has a crucial role in this respect, not only because decision of women on migration is determined by their changing living situations, but it is strongly influenced by their attitudes and identities. This is maybe the greatest contribution of this section.

In the first study of this section (Chapter 2), Mireiya BAYLINA, María Dolores GARCIA-RAMON, Ana María PORTO, Isabel SALAMAÑA and Montserrat VILLARINO investigate how highly-qualified women in Galicia and Catalonia perceive 'the rural' and characterise 'the rural woman'. They point out that although the respondents are rural residents, they do not identify themselves as typical rural women. Most of them classify themselves as rural professionals. Their narratives contain elements of the traditional rural idyll that are much appreciated by postmodern labour (e.g. peaceful tranquillity), while their mobility (e.g. owning a car) enables them to maintain a high living standard in the countryside.

Gesine TUITJER (Chapter 3) discusses the everyday life experiences of young mothers in three rural communities in Western Germany. She comes to the conclusion that normative assumptions about female roles (especially, being a mother) have a significant effect on the interviewed women's self-perceptions. They predominantly construct their lifestyles based on the traditional family model involving a male breadwinner and a female caregiver. Nevertheless, most of them adjust their roles according to the changing rural milieu, developing a postmodern suburban/rural lifestyle.

Using a questionnaire survey, Éva G. FEKETE (Chapter 4) examines rural inhabitants' attitudes towards traditional, modern and postmodern values in eight Hungarian and Transylvanian micro-regions. The study sheds light on significant gender differences, as women are more often devoted to postmodern values (e.g. nature, social participation) than men. This is particularly true for those with higher level of

educational attainment, and for those living in culturally more open communities (i.e. for women more influenced by external factors, like commuting or re-migration). In the near future, these areas can become more successful, since their inhabitants possess the appropriate competencies and attitudes to utilise local resources for a postmodern-type of development.

In their study, Nana ZARNEKOW and Christian HENNING (Chapter 5) see perceived quality of life as an important factor in migration decisions. Employing a standardised household survey, they examine local residents' evaluation of and satisfaction with life conditions in two rural and two suburban communities in Poland, with a special emphasis on gender differences. Their analysis reveals that employment opportunities are a key component of the quality of life for both women and men, although the natural environment and cultural and social life seem also important. The authors draw the conclusion that rural migration in Poland is dominated by regional labour market conditions, and there are no considerable gender differences in the motivations to move.

The second main part of the volume is comprised of four studies focusing on Germany and Poland, and it is devoted to rural labour markets and gender inequalities in migration. It is well illustrated by these studies that structural characteristics of regional and local rural labour markets disadvantage women, and real as well as perceived deficiencies of job markets can act as a major push-factor in migration. Nevertheless, contributors of this section also demonstrate the notable benefits of self-employment, and the role of social and creative sectors which not only enhance female job prospects but contribute to sustainable regional development.

First, Kim Philip SCHUMACHER and Alexander KUNZ (Chapter 6) introduce the possible causes of graduated pupil's out-migration in rural Northern Germany. According to their results, the majority of surveyed youngsters have a strong intention to leave their region for further education or work, but regional labour markets have unequal effects on female and male migration behaviour. While young men see better chances in attending vocational training or finding a job in the secondary sector, young women are more dissatisfied with educational and employment opportunities in their region. Authors conclude that in the decision of young people on migration, the structure of local labour markets and gendered job preferences are equally important explanatory factors.

Susanne SCHMIDT (Chapter 7) examines the spatial patterns of women working in creative occupations in Germany. One of the main results of her statistical analysis is that in the spatial distribution of creative female workers East-West differences are more pronounced than the urban-rural dualism. Rural areas in Eastern Germany show a relatively high share on creative labour. Therefore, the commonplace that

creative workers are predominantly concentrated in metropolitan areas cannot be confirmed in the case of Germany. Regarding explanatory factors, comfortable working environment in terms of public service provision (e.g. the distribution of health-care and educational institutions) or economic prosperity play a dominant role.

Ewa ROLLNIK-SADOWSKA (Chapter 8) convincingly demonstrates that the structure of labour markets in rural Poland clearly disadvantages women. The character of job markets is a significant push-factor. Nevertheless, as the author argues, self-employment and female entrepreneurship can be effective tools for enhancing women's job opportunities and fostering regional economic development. In line with the relevant international literature, ROLLNIK-SADOWSKA emphasises the usefulness of local knowledge and traditions in launching women's businesses under harsh economic circumstances. However, there is an urgent need for the support of local and central authorities, because insufficient transport and social infrastructures (e.g. lack of child-care facilities) hinder the reconciliation of job and family life for rural women.

Similarly to the previous study, Bogusław BEMBENEK, Teresa PIECUCH and Joanna SUDOŁ-PUSZ (Chapter 9) draw attention to the importance of female entrepreneurship and economic cooperation in rural Poland. Using a qualitative approach, they examine business clusters and social cooperatives as potential forms of collaboration between local businesses. They argue that business clusters and social cooperatives can foster entrepreneurial attitude among women and create attractive workplaces at the same time providing a framework for cooperation and meaningful competition between the members. Therefore, such organisations embody real alternatives for rural regions facing growing unemployment and the decline of agricultural incomes.

The third part of the book deals with living situation of rural women, gendered migration and the relevance of gendered aspects in rural policies. Authors in this section discover relevant gender-sensitive factors that should be taken into account by policy-makers. Using empirical data on Spanish rural areas, Luis CAMARERO and Rosario SAMPEDRO (Chapter 10) focus on gendered migration and rural employment opportunities. They make a remarkable contribution to existing literature, arguing that labour mobility is a fundamental factor in both rural masculinisation and female job prospects. Due to the structural deficiencies of local labour markets, women have to out-migrate from rural areas at a higher rate than men, and for better job prospects out-migration is essential for rural women to access higher-quality occupations. Yet, for older generations, domestic care-giver role is a significant barrier to mobility. The authors come to the conclusion that women in rural Spain experience a double disadvantage. To find an appropriate

job, they have to show a higher level of mobility, but their mobility is often limited by social expectations towards them. Therefore, the authors call for public policies that foster equality between men and women in terms of mobility opportunities.

Verena PEER (Chapter 11) investigates the factors influencing the migration behaviour of female graduates in rural Austria. Her results show that while developing their own professional and family life, highly qualified women like to combine the benefits of urban and rural lifestyles. While the former meet their job preferences (e.g. better employment opportunities), the latter satisfy their housing needs (e.g. similarities with their communities of origin). Decentralised (i.e. located in rural areas, at a noticeable distance from urban agglomerations) higher-educational institutions (HEIs) play an important role in this respect, as they foster the development of regional labour markets and contribute to the quality of life in the region. Actually, there is a complex mixture of natural, economic, social and cultural amenities that is highly valued by the postmodern skilled labour (e.g. the surveyed women). This chapter is a magnificent contribution, because it demonstrates the potential of decentralised HEIs for attracting skilled labour, retaining youth and encouraging re-migration or circular migration.

In the last chapter of the book, Theresia OEDL-WIESER (Chapter 12) looks at the feasibility of producing gender-sensitive rural policies illustrated by the case of Austrian rural and regional development. She provides a comprehensive overview on the concepts of gender equality and gender mainstreaming, and policy recommendations for various levels of state administration. She is critical to the EU and to the insufficient implementation of gender policies, and points out that "*gender equality and gender mainstreaming are often no more than rhetorical reference rather than an integral part of programmes*" (p. 236). The conclusion of the study could be the conclusion of the whole volume. On the one hand, gender issues should be integrated into rural policies at various levels and on the other hand, there is a need to intensify research on rural governance structures and processes in the future, from a gender equality perspective.

In summary, maybe the greatest advantage of the present volume is the wide range of viewpoints. Firstly, the topics covered by the studies are manifold, but most of the themes are definitely in the centre of academic research on gender and the rural (e.g. representations of the rural, labour markets). Secondly, the volume provides different approaches. For instance, the combination of functionalist and social constructivist approaches helps us to understand the complex realities of gendered rural life. Thirdly, methodologies applied by the authors include both quantitative and qualitative methods, such as statistical analysis, standardised questionnaires, in-depth

interviews and narrative research. Fourthly, the book introduces case studies from several countries with different historical development paths, political systems and welfare regimes. The authors gathered evidence from Western European countries (Austria, Germany), from Southern Europe (Spain) and from East Central European post-socialist states (Hungary/Romania, Poland).

The book is an academic writing with solid arguments, and it is easily readable at the same time. Illustrations are also of high quality. The volume contains 16 figures, 13 maps, 14 tables, photographs and interview quotes as well, which are all detailed, accurate and informative. The book is highly recommended to all, especially to scholars and policy-makers in the field of gender, rural and migration issues.

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<sup>1</sup> University of Szeged, Szeged, Hungary.  
E-mail: fabula.szabolcs@geo.u-szeged.hu

Meusburger, P., Freytag, T. and Suarsana, L. (eds.): *Ethnic and Cultural Dimensions of Knowledge*. Dordrecht, Springer, 2016. 304 p.

In contemporary academic discourses one can scarcely find any views questioning the pivotal role of culture in knowledge systems. The close relationship between cultural values and learning processes is distinctly highlighted in the processes of communication, adaptation, acculturation, hybridisation and the individual's subjective interpretation of the world itself. Cultural identities, which might be intertwined with ethnicity as well, can significantly influence attitudes towards school and education. Therefore, gathering knowledge is strongly linked to and influenced by the cultural dimension: "Every form of knowledge is somehow 'cultural'" (STROHMAYER, U. 2003, p. 521.). This aspect should be taken into account while one is investigating topics related to knowledge, for different cultural patterns may either assist or hinder the process of learning.

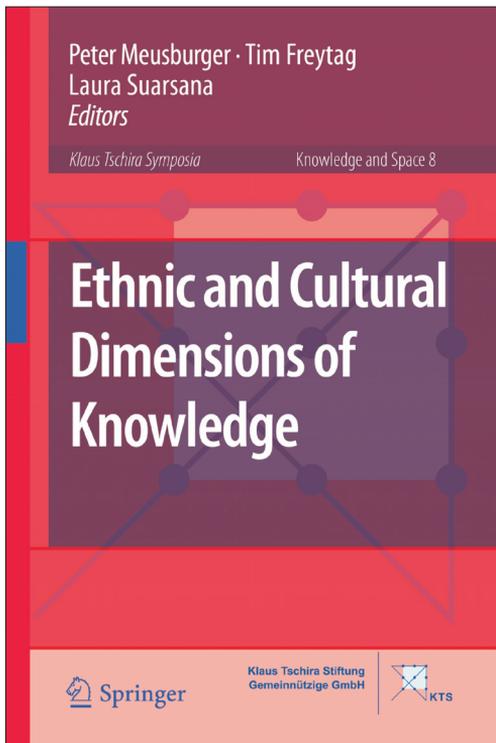
Despite the paramount importance and relevance of these issues, the moderate interest from geographers might be surprising. Proponents of new cultural geography have accused traditional cultural geography of paying too much attention on material forms of culture instead of investigating their mean-

ing, symbolism, textuality or social embeddedness. The new cultural geography, however, still neglects to focus on problems such as consequences of racial and ethnic disparities in educational attainment, the impact of cultural factors on cognitive capacities and educational attainment or the suppression of minorities through the educational system. Terms such as knowledge or education are quite omitted in the comprehensive handbooks of cultural geography (MITCHELL, D. 2000; ANDERSON, K. *et al.* 2003; GEBHARDT, H. *et al.* 2003; DUNCAN, J.S. *et al.* 2004; ATKINSON, D. *et al.* 2005). The book of MEUSBURGER, FREYTAG and SUARSANA attempts to fill this gap by presenting multidimensional viewpoints.

The volume is a result of the 8<sup>th</sup> Symposium of the 'Knowledge and Space' series held in Heidelberg. Its main organisers were Peter MEUSBURGER, distinguished senior professor in the Institute of Geography at the Heidelberg University, Laura SUARSANA, research associate in the same institution, and Tim FREYTAG, professor at the Faculty of Environmental and Natural Resources at Freiburg University. The book consists of 13 chapters, wherein the first five texts deal with issues of education in multiethnic states. The subsequent four chapters explore the relevance of indigenous knowledge in various contexts. The final four chapters highlight the function of culture in everyday situations.

Peter MEUSBURGER presents in his study the educational system as a heavily contentious field of political and cultural interrelations. He evokes the introduction of compulsory education, which had a major impact on the evolution of nation-states, the shaping of the common consciousness of societies and the genesis of nationalism. Given the soft traits of cultural identity, assimilation and transculturation occur continuously, and they are being shaped especially by the educational system.

National governments discovered the potential benefit of this a long time ago, thereby schools could serve as appropriate means for the endeavour of nation-building and pursuits of cultural homogenisation. The study employs examples of this sort, where minorities in multiethnic states undergo different types of discrimination, suppression and forced assimilation during learning processes. Thus, ethnic self-esteem, cultural identity and sense of belonging of the students get reinforced, what results in discrepancy with their cultural roots. Through the wide-ranging examples MEUSBURGER emphasises the importance of situatedness and embeddedness in the spatial context, disapproving universal toolkits in scrutinising cultural diversity.



The next chapter offers an insight into the public school system in the United States, focusing on the specific interconnection of race, power and geography. Adam FAIRCLOUGH attempts to find the proper explanation of why Southern public schools have been constantly more underdeveloped over the centuries than the Northern ones. From the very beginning the South has not showed substantial interest in developing public schools due to a possible menace what educated slaves were thought to mean to the reigning system of social hierarchy. After the Civil War more sophisticated methods emerged in the restriction of Black education, leading to a racially segregated school system that conserved inequality. As a result of the Supreme Court's decision, public schools in the South were finally integrated, thus segregated education was theoretically dismissed. In fact, integrated schools abolished Black schools too. Yet, although an achievement gap still persists between North and South, integration has actually diminished the long-standing disparities.

The narrative of strikingly uneven educational conditions continues to be discussed in the next chapter as well. Werner GAMERITH affirms that the American school system has never fully carried out its mission to put egalitarian ideological concepts in practice. Social stratification along ethnic and racial relations has become an evident part of the daily routines, where schools are no exception. As GAMERITH asserts, the subordination of certain groups was essential in sustaining the American vision of well-being. For instance, ripping Native American children from reservations into boarding schools several hundreds of miles away sheds light on how severe the issue is. As far as differences in education attainment are concerned, financial endowment plays a major role due to the fact that the funding of public schools mainly depends on local property taxes. Thus, school dropouts and low literacy rates coincide in space with patterns of economic underdevelopment.

Tim FREYTAG studies the role education plays in the social reproduction of socioeconomic and cultural inequalities in higher education and research institutions in the southwestern U.S. state of New Mexico. He argues that the factors determining educational success, such as family background or the social milieu, a person's capabilities to learn, the quality of teachers, the availability and accessibility of education infrastructure are all working together. Being aware of the complex intersectionality of a wide range of parameters, Freytag approaches the issue through the conceptual lens of sociocultural and geographical embeddedness. Firstly, he presents the low educational performance of Hispanics mainly on basis of census data. Then he writes from the perspectives of Hispanic students and teachers. His findings suggest that Hispanics tend to be particularly dependent upon their own cultural context in the family, hence the university milieu claims a great challenge from them.

George J. SEFA DEI uses students' narratives of schooling experiences in order to theorise the particular case of Black and other minority youth education in Euro-Canadian contexts. He affirms that prevailing power relations and internal colonial hierarchies hinder identity and empowerment for community-building as well as individual and collective agency. Adopting an anticolonial discursive framework one must dismantle dominant discourses in order to reduce the marginalisation of certain voices and knowledge systems. The anticolonial prism, that is to say, glorifies the local cultural knowledge, which it identifies with equity, social justice, resistance, self-esteem, and fairness. While analysing school dropouts and practices of exclusion the author puts structural, socio-political and human dimensions at the centre, arguing that a complex factor reflecting class, gender, race, ethnicity, power and history should be utilised as primary determinant in the process of re-envisioning the education. The education system generally dispenses with the rich source of knowledge brought by the students from cultural milieus. DEI presents successful students' individual strategies as well, concluding that engagement with social differences can partly explain students' performance.

Heading towards the next thematic part of the book, Chapter 7 offers an exploration of 'indigenous knowledge', especially its links with development studies. The term itself constitutes an attempt to emphasise the prominence of local voices and practices. Adherents of this approach frequently focus on dichotomies of knowledge systems, distinguishing between the so-called 'Western' objective scientific knowledge and the local practical knowledge such as indigenous knowledge, traditional knowledge and native knowledge. The latter systems, however, involve some inconsistency due to the fact that nowadays neither one is truly indigenous to anywhere nor tribal societies identify themselves as indigenous. Employing geographical scales, such as the 'glocal', may lead towards a more adequate understanding about how knowledge is functioning in the contemporary globalised epoch (ROBERTSON, R. 1995). In the case of the Wola people from Papua New Guinea Highlands, Paul SILLITOE discusses ways where language barriers thwart the very first steps of development interventions. As the case of Wola people reflects, assessment and transmission of knowledge varies widely from place to place, what prevents us from finding general answers to developmental problems.

In one of the two chapters of the book dealing with local knowledge, Cristoph ANTWEILER demonstrates that the concept should be conceived as a continuum between formal science and everyday traditionality. These two, as the argument continues, could not be equated nor contrasted because none of them is more valuable than the other one. While the previous chapter examines rural space, this one presents an urban

context. The fieldwork spent in the Indonesian city of Makassar can be regarded as the central thread. Instead of theorising findings, however, ANTWEILER rather deals predominantly with methodological outcomes. He recommends repertory grid method as a promising alternative way of ethnological fieldwork in cognitive anthropology. One of the main advantages of this study is that it offers the reader an appropriate and well-detailed toolkit, which may be quite applicable for similar empirical researches.

Regarding the multidimensional trait of local knowledge, the place-based character should also be taken into account. Accordingly, Marcus NÜSSER and Ravi BAGHEL focus on geographically situated or site-specific knowledge generation. Hence, they intentionally deviate from the aforementioned concept of indigenous knowledge, which foregrounds stakeholders' ethnicity and tradition. Site-specific knowledge emerges through people's practical engagement with their environment. Artificial glaciers reflect upon this topic in Ladakh, where rapid socio-political transformations have taken place, demonstrating the heterogeneous feature of local knowledge. These glaciers used to store frozen water to cope with water scarcity. Yet, current concerns about the global climate change attributed new functions to them, thus local knowledge gets torn apart from its local context. As the case study points out, local knowledge and external scientific knowledge are sometimes hard to separate from each other since their relation is dynamic and fluid.

Diana D. DAVIS presents through the case studies of pastoralists in the Maghreb and Afghanistan how indigenous knowledge has been, and continues to be, eroded. Despite unfavourable environmental conditions, the nomads had been able to produce an impressive number of livestock and agricultural harvest until the 19<sup>th</sup> century, but the consequent suppressive measures imposed by the colonialist expert knowledge continuously deteriorated the complex ecological knowledge system of pastoralists. Concerning the Maghreb, the French restricted the accessibility to natural resources, appropriated agricultural lands and forest, imposed incompatible veterinary medicine on the local population, and prohibited common techniques such as using fire on the lands. Most of the adverse laws remained in effect under the post-colonial era too, what supplemented by the mainstream development projects resulted in the further loss of indigenous knowledge. In Afghanistan Koochi women possessed a rich knowledge of how to treat animals and their diseases. Western developmental programs failed to take account of local gender relations though, hampering women's traditional way of life. There can be no doubt that the author is truly committed to preserve indigenous knowledge.

Chapter 11 offers probably the most peculiar insight into how indigenous knowledge really manifests itself in practice. The extensive field research in

the Papua New Guinean Trobriand Islands by Gunter SENFT helps us understand the gradual shrinkage of indigenous knowledge, which is indirectly facilitated by the cultural and economic dimensions of globalisation. Among the population of the islands the construction of large seagoing, so-called *masawa* canoes used to be the end-product of a complex cooperation, which included different forms of technical and magical knowledge. The process of making these canoes was deeply integrated into the community's social network. Thereby the building process was a matter of bringing people together and letting them take part in the distribution of knowledge. In consequence of the changing economical-political external environment, *dinglies* started to replace *masawa* canoes. The decay of canoe building had a crucial impact not only on technologies, social events and the traditional faith, but affected people's cultural identities and cognitive capacities as well.

The subsequent chapter deconstructs the precolonial Igbo societies' ceremonies, highlighting the peculiar trait of these norm-bearing activities. Taking Ikechi MBEJI's argument, instead of considering ceremonies as a manifestation of marry-making and pointless ritualistic drama, he looks beyond the normative traits and perceives them as crucial events in order to transmit knowledge. The study offers an in-depth description of ceremonies taking place in the Igbo society (for example birth, marriage, burial, passage into adulthood). According to MBEJI's conclusion, the ceremonies should be reconceptualised as principal means for encoding traditional knowledge and practices. One could consider Igbo as either a speaker of the language, the area occupied by the community, the language, or the ethnic group itself. Nevertheless, the colonialism affected all these spheres, thus the whole cultural practices of Igbo have been subjected to westernisation designed to overwrite native law by the English common law. During the colonial and even postcolonial periods ceremonies thereby significantly lost the capability of transferring key knowledge among each other.

In the last chapter William T.S. GOULD reveals the existing cleavage between knowledge and behaviour in the context of HIV/AIDS prevalence in Sub-Saharan Africa. In recent development studies, as the modernist way of spreading factual knowledge has become a dubious project, a new approach emphasises the awareness on existing indigenous knowledge systems. Regardless of formal or indigenous knowledge acquisition, however, access to more and better information per se is not sufficient to enhance living conditions in a certain group. Despite the fact that knowledge about avoidance is getting quite accessible nowadays, we still experience rising infection rates due the prevailing gap between knowledge and behaviour. There seems to be medical evidence for two practices efficiently reducing HIV prevalence rates,

namely male circumcision and reducing the number of sexual partners. Nevertheless, both practices are deeply connected to cultural factors. For example, one could not deem male circumcision as a mere medical intervention, but rather a momentous cultural event. Not surprisingly, the less this intervention is being part of the custom, the higher HIV prevalence comes about.

Given the heterogeneous ethnic patterns and different cultural attitudes in East Central Europe, some chapters of the book can contribute to a more sophisticated interpretation of sociocultural processes in the region. Attempts to assimilate ethnic minorities have had a long history here, and the conflicts after the fall of the Iron Curtain proved that ethnic conflicts have not ended yet. Nonetheless, contemporary conflicts have rather been transferred into soft spaces like education. Thus, the theoretical framework and methodological references of the volume can be made use of in education systems of this region. Furthermore, the anti-colonial approach presented by George J. SEFA DEI can be useful in the East Central European context as well, due to the socialist past and the former subordination to the Soviet Union.

Investigating different dimensions of knowledge will remain a prominently contentious field of interdisciplinary research. As pointed out in the book, history, environmental studies, cultural anthropology, jurisprudence and psycholinguistics could also contribute to the issues of traditional, local and indigenous knowledge. Moreover, geography reminds us about the relevance of various scales and the spatial context. By offering a multi-perspective outline, the book substantially extends the discussion about the interrelated questions of culture and knowledge. Thus, it serves as a proper starting point for all of those, including academics, students or those outside of science, who are interested in the cultural aspects of the generation and diffusion of knowledge.

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<sup>1</sup> Eötvös Loránd University (ELTE), Budapest.  
E-mail: [tamas.illes92@gmail.com](mailto:tamas.illes92@gmail.com)

Wyss, M. and Peppoloni, S. (eds.): **Geoethics. Ethical Challenges and Case Studies in Earth Sciences.** Amsterdam–Oxford–Waltham, Elsevier, 2015. 450 p.

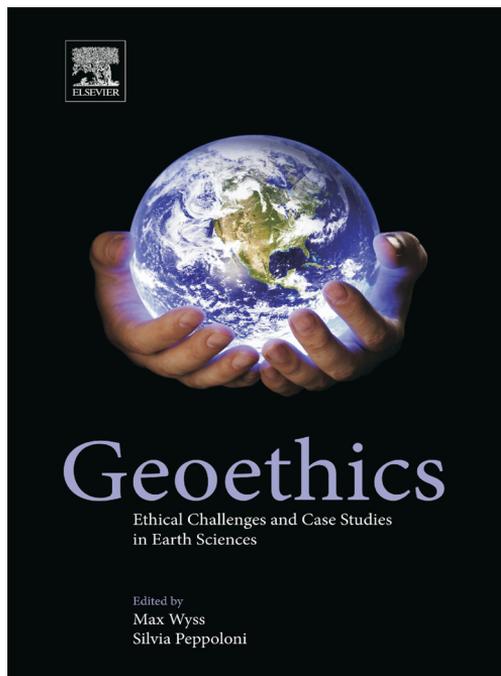
The book provides a unique insight into the emerging field of geoethics and current ethical challenges facing geoscientists. According to a definition in Chapter 1 'geoethics consists of research and reflection on those values upon which to base appropriate behaviour and practice where human activities intersect the geosphere' (p. 4). Like bioethics, geoethics is a form of applied ethics, a new branch of ethics dealing with moral problems, practices and policies especially connected to geosciences, the need for which was first addressed on geological and geoscience conferences in the last two decades. The book is edited by two scholarly geologists devoted to the international enhancement of ethical consciousness in geosciences. Max Wyss (International Centre for Earth Simulation, Geneva, Switzerland) is a worldwide acknowledged geophysicist on earthquake risk reduction, while Silvia Peppoloni (National Institute of Geophysics and Volcanology, Rome, Italy) serves as Secretary General of the International Association for Promoting Geoethics.

The 33 chapters of the book written by 47 different authors shed light on geoethical practice and inquiry from multiple angles. The authors are mainly geophysicists, geologists and also scientists and technical professionals experienced in different areas of risk re-

ductions and disaster mitigation, while some authors are coming from philosophical and ethical institutions. The volume is thematically divided into six sections. 'Philosophical Reflections' (chapters 1–6) is placing geoethics in the context of geosciences and applied ethics. 'Geoscience Community' (chapters 7–9) gives an overview about the ethical endeavours of geoscientists, 'Ethics of Practice' (chapters 10–16) discusses several interesting issues about the ethical dilemmas of those practicing geosciences, while 'Communication with The Public, Officials and The Media' (chapters 17–23) deals with possible ways to communicate environmental uncertainty and risk with a broader public. The section on 'Natural and Anthropogenic Hazards' (chapters 24–29) is followed by writings on the especially vulnerable position of 'Low Income and Indigenous Communities' (chapters 30–33).

'Philosophical Reflections' introduces the case studies presented in the book, provides definitions of geoethics and outlines the broader academic and social context. The opening chapter entitled 'The Meaning of Geoethics' employs a practical notion, focusing on geoscientists' responsibility while practicing research, and sharing strategies for a more ethically conscious future. The second chapter connects geoethics more to the domain of philosophy. Using hermeneutic and phenomenological approaches, this chapter argues for an applied ethics based on a reciprocal communication not just between theory and practice in general, but also between ethicists/philosophers and geoscientists in particular. The following chapters of this part of the book are also reflecting the integrative notion of geoethics. We can read about how geoethics can serve to meet goals of sustainability (Chapter 3), about the flagship position of disaster research in the field of geoethics (Chapter 4), and about the need for an inclusive, interdisciplinary and application oriented field of geoethics (Chapter 5) in line with that 'Science and Technology can no longer be seen as value-neutral providers of knowledge and certain means, leaving only the user and society to think about the moral dimension of their "application"' (p. 51). Chapter 6 offers an interesting insight from the perspective of evolutionary biology into the constraints of human mind when dealing with deep time and historical contingency, which are worth considering when probabilities and uncertainties of geoscientific results are communicated to a broader public. The ideas concerned in the first six chapters lead up effectively to the more special cases analysed in the later chapters of the book.

The second section ('Geoscience Community'), concentrates on the professional ethics of geoscientists, and



their challenges in conducting research responsibly. The section starts with an overview (Chapter 7) of research integrity, and cases of misconduct like data fabrication, falsification or plagiarism. (Chapter 9 discusses plagiarism in more detail.) The role of statements resulting from international conferences on research integrity is emphasised, just like the Singapore statement and the subsequent Montreal statement on cooperative research projects. Chapter 8 scrutinises the development and challenges of the Scientific Integrity and Professional Ethics Policy of the American Geophysical Union, offering useful insights for other institutes considering the ratification of such a policy.

The third section ('Ethics of Practice') focuses on the particular perspective of the involved researcher, who is identifying seismically active faults, estimating the maximum magnitude or peak acceleration of a maximum credible earthquake (chapters 11–14), or the maximum height of a tsunami (Chapter 15), and who unavoidably enters public debates, often fuelled by contradicting interests of public, business and government sectors, which might be interested in building dams or nuclear plants, for example. The subjective reconciliation of William GAWTHROP (Chapter 13) sheds light on the ethical dilemmas of geoscientist from a very personal perspective. Right at the beginning of his career, the seismologist GAWTHROP dedicated himself to estimating the maximum credible earthquake in a Northern Californian region, a project gaining special relevance due to the construction of a nuclear plant. Because of this he faced a massive intervention of 'corporate money' to science, leading to his falling out from seismological research. His case and personal involvement, which are expressed in other chapters (Chapters 10, 11 and 14), illuminate the perceived ethical challenges and obstacles of researchers who try to give credit to scientific evidence. Chapter 10 demonstrates that while arguing for the acknowledgement of scientific claims, such as the acceptance of proper seismological methods in the late Cold War period in estimating the explosive yield of an underground nuclear weapon, how easily can be accused of 'playing politics'. Chapter 16 reflects on how scientific evidence and goodwill may not always be enough in practice for efficient risk reduction. For example recommendations from Muslim countries exemplify in this chapter that international rescue teams involved in hazard assessment should pay special attention to religious beliefs and cultural practices of the locals in order to foster cooperativeness, a highly necessary factor in disaster mitigation.

The next two parts on 'Communication with The Public, Officials and The Media' and 'Natural and Anthropogenic Hazards' continue to examine, now in more detail, the roles and responsibilities of researchers in communicating uncertain risks to the public. These parts begin with comments on the 'L'Aquila Trial' (Chapter 17), where seismologists, engineers,

and civil defence officers were sentenced for 'misinformation' of the public before the 2009 earthquake. (This incident is a kind of reference point, returning several times in the book, and might well be considered as a benchmark in geoethics.) This case also underlines the necessity to clearly identify roles and responsibilities in the decision making process, which are the topic of the next Chapter 18. Pitfalls of communicating earthquake predictions in Greece (Chapter 19) and earthquake and tsunami predictions in Japan are discussed (Chapters 22 and 26), such as the lack of cooperativeness between institutions, providing biased, contradictory and confusing information for the public. In Chapter 20 standard probabilistic earthquake hazard maps, derived from geophysical data only, are assessed as an inadequate tool to calculate expected risks and fatalities, therefore they cannot serve the need of the population efficiently. Chapter 21 reflects on the social constructedness of maps, tools and products of disaster research, arguing that these are selective representations, and so their interpretation is unable to represent the manifold aspects of risk, vulnerability and resilience. These limitations of maps are necessary to be considered in disaster mitigation.

Two chapters are pronouncedly dealing with educating the public. Chapter 23 addresses the gap between the public and scientists and presents how straightforward, short and easy-to-understand communication can be efficient in risk communication. The chapter employs the example of risks connected to the changes of the seaside due to climate change. In Chapter 27 the duties of the Vesuvius Museum Observatory to educate people living close to the dormant volcano are presented. Yet, not just one-way communication from the well-informed scientist to the information-seeking public is considered but participatory approaches as well, aiming to establish mutual engagement with locals. The two participatory examples from the book are an interactive and participatory multimedia map of avalanches (Chapter 21, p. 259), and the adaptation of participatory decision processes in radioactive waste management in the UK (Chapter 28). Experiences from participatory processes reveal that transparency and openness in scientific and technical debates, and partnership among participants are needed in every phase of risk mitigation.

In the next part on 'Low Income and Indigenous Communities' special attention is paid to marginalised groups. As Chapter 30 shows, the specific rights of indigenous peoples to decide about their own way of life and development, declared by the human rights framework of the United Nations, are rarely or inadequately considered in environmental assessments. Similarly, low income communities (chapters 31–33.) have limited possibilities of participation in the decision making process, and they often live in regions with lower infrastructure. Both of these inequalities are affecting the exposure of these marginalised groups to environ-

mental risks and the effectiveness of risk mitigation. Two case studies are presented about the side-effects of and inequalities in decision-making with regard to mining. These are about indigenous communities in the Tampakan region of the Philippines (Chapter 30) and low-income workers from Keonjhar District, India (Chapter 32), where shortcomings of ethics in mining are discussed. Solutions like free, prior, and informed consent are suggested, which were also defined by the United Nations Permanent Forum on Indigenous Issues in order to establish participation and consultation with indigenous people prior to a development project (Chapter 30).

The volume is a well-structured collection of inspiring writings, which raise several thoughts and questions about the aims and future perspectives of geoethics. From the point of view of a geographer who is interested in landscapes, environmental history, and local and traditional ecological knowledge, there is a lot of opportunity for geoethical enquiry and to find connections to a diverse field of study. Almost all case studies are restricted to a narrowly defined domain of geoscience, mainly consisting of different subfields of geology (although no case studies are addressed to ethical challenges in agro-geology or hydrogeology). Geography, soil science, climatology and Earth system science are underrepresented in this volume, however. Extreme hazards, such as earthquakes, tsunamis, volcanic eruptions dominate the case studies, while long-term and gradual risks are rarely considered. (This problem is issued in Chapter 23 and 33). Another interesting point only superficially mentioned is the cooperation of geosciences in risk mitigation, and division of labour between different disciplines. Remarkable examples are climate-change-induced hazards (mentioned only in Chapter 23), or models where climate factors only appear on the input side (see Chapter 24 on the dispersion of volcanic clouds). These kinds of issues are more complex, and the responsibilities of scientists are even less clear. This sort of selectivity might simply result from the academic background of geoethics, which is suggested to have gained impetus due to works of geophysicists on fatal hazards (history and predecessors of the field are only briefly addressed in the last chapter on p. 411). Yet, the circle of scholars involved in geoethics might become more diverse and, consequently, the scope of geoethical research will hopefully expand to a much wider domain in the future.

Another question is whether geoethics will become a kind of a well-defined professional ethic practiced by geoscientists, or whether it will develop to a much wider field and movement, practiced by scholars coming from outside of geosciences as well, namely from social sciences and humanities, or by multi-disciplinary research groups. This volume is dominated by the perspectives of geoscientists, while theories from

and central issues in social sciences and humanities are rarely addressed. (Some exceptions are Chapters 2, 5 and 21, the latter two of which were written by authors from a special institution for applied ethics, the International Centre for Ethics in the Sciences and Humanities at the University of Tübingen, in Germany). Methodologies of actor-network theory (briefly mentioned in Chapter 21), science and technology studies, or historical analysis practiced in political ecology would also be easily applicable to geoethics, and could bring new approaches to the field.

The connection of geoethics to the field of environmental ethics (addressed in Chapters 2 and 5, and mentioned in Chapter 6), and the difference between both remain unclear issues in most case studies. It is noted several times, however, that geoethics might be parallel to bioethics. This is the central notion in Chapter 28 with a very interesting joint discussion of public debates on Creutzfeldt–Jakob disease and nuclear waste management. It remains unanswered whether geoethics can move towards the relational ethics of hybrid nature/culture (WHATMORE, S. 2002), and how traditional resource management practices, environmental knowledge of locals and indigenous groups, and their perceptions on environmental risks can be addressed. (Traditional ecological knowledge is mentioned only in Chapter 21. For further reference see BERKES, F. 2012). To incorporate such different perceptions and values, a more plural vision of ethics should be introduced (cf. the introductory Chapters 2 and 5), and more attention should be paid to approaches in postmodern ethics, which challenge normative and Kantian ethical approaches, also applied in Chapters 12 and 29.

Although East Central European authors and case studies are not included in this volume, geoethics might attract more attention from these countries than what the volume seems to suggest. For example, since 1992 a series of international meetings on geoethics has been organised in the Czech Republic as part of the Mining Příbram Symposia. Ethical concerns of earthquake research might be less striking geoethical topics in this region, but other topics can definitely be, such as the impact of socialist and post-socialist mining or agro-geological and geographical enquiries connected to the locally adapted and developed versions of the Great Stalin Plan for the Transformation of Nature in the 1950s.

To conclude, the book is an excellent enterprise to encourage discussions about ethical issues in the geoscience community and beyond. Its findings could be useful not just to raise the ethical consciousness of the geoscience community by highlighting its role in coping with environmental risks and uncertain hazards within society, but it could also be a relevant starting point for further interdisciplinary and social science studies in the field. Interesting and urgent topics are discussed, ranging from the predictability of earth-

quakes and nuclear waste management to mining and indigenous rights as well as ethics of research and communication. Altogether, the volume with the diverse range of presented case studies promotes open discussion on moral dilemmas facing geoscientists, and argues for more reflective and transparent ways of practicing science with enhanced responsibility and solidarity.

NOÉMI UJHÁZY<sup>1</sup>

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<sup>1</sup> Eötvös Loránd University (ELTE), Budapest.  
E-mail: unoemi@gmail.com

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