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FACING POST-SOCIALIST URBAN HERITAGE

Proceedings of the 3rd international doctoral–postdoctoral conference organized by the Department of Urban Planning and Design, Faculty of Architecture, Budapest University of Technology and Economics (BME)

DOCONF2019

Editor: Melinda BENKŐ

urb/bme

4-5th October 2019

1111 Budapest, Műegyetem rkp. 3.

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The urb/doconf 2019 conference is a partnership between urb/bme and the International Specialist Committee on Urbanism and Landscape (ISC U + L) of DOCOMOMO, the leading international network for the documentation and conservation of the modernist heritage. The specific mandate of the ISC U + L is to promote documentation and conservation of the wider environments and ensembles of modernism, especially of the post-war reconstruction years, as opposed to a narrow focus on individual set-piece monuments. This remit is closely echoed in the focus of the doconf events on the broad environments of socialism and post-socialism – hence the partnership between the two organizations, which also extends to these e-proceedings of the 2019 conference.
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1111 Budapest, Műegyetem rkp. 3, 2nd floor, 10
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Department of Urban Planning and Design
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Director of Scottish Centre for Conservation Studies, University of Edinburgh

4 consecutive sessions about mass housing neighbourhoods, urban space for reuse, landscape transformation
moderated by Melinda Benkő, habil. PhD (BME), prof. Barbara ENGEL, habil. PhD (Karlsruhe Institute of Technology), Willemijn Wilms FLOET, habil. PhD (TU Delft), prof. Miles GLENDINNING, habil. PhD (University of Edinburgh), Bálint KÁDÁR PhD (BME), Anna Agata KANTAREK PhD, DSc (Cracow University of Technology), prof. Richard KLEIN PhD, HDR (ENSAP de Lille), prof. Irina KUKINA PhD (Siberian Federal University), Árpád SZABÓ DLA (BME), Julianna SZABÓ PhD (BME), David TICHÝ, habil. PhD (Czech Technical University in Prague), Endre VÁNYOLOS DLA (TU Cluj-Napoca), prof. Lubica VITKOVA, habil. PhD (Slovak University of Technology in Bratislava)

31 lectures presented by /
PhD doctoral students, candidates or post-doctoral researchers who are architects, landscape architects, planners and architectural historians
arriving from different PhD doctoral schools specialised in architecture, urban planning and design (Armenia, Belgium, Czech Republic, France, Germany, Hungary, Italy, Japan, Slovak Republic, Poland, Romania, Russia, Serbia, Switzerland, USA)

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The conference is in English, and participation is free. Everyone is welcome!

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Foreword

The Department of Urban Planning and Design of the Faculty of Architecture at Budapest University of Technology and Economics (BME) promotes cooperation among doctoral schools specialized in architecture and planning by building a network for future generations of scholars with the scope of facilitating collaboration in their specific fields of research related to post-socialist urban heritage.

DOCONF2019, this two-day international conference entitled "Facing Post-Socialist Urban Heritage", is the third in a series of doctoral conferences to be organised on a bi-annual basis, which will provide a comparative overview of current doctoral topics and research methods. This year the Chairs, besides the faculty of the hosting department, arrived from the Czech Republic, France, Germany, the United Kingdom, the Netherlands, Poland, Romania, and Russia. The selected speakers, PhD doctoral students, PhD candidates, and post-doctoral researchers (holding a doctorate degree for less than 5 years at the time of the conference) represented eighteen countries, with a background spanning a much wider area (see map with the cities where participants lived more than three months, pp.12-13).

Current challenges are posed by large-scale ensembles of the 20th century modernity, thus applied research in architecture and planning are indispensable not only for their documentation and evaluation, but also for their possible renewal by contemporary needs and requirements related to socio-cultural and physical context. DOCONF2019 was composed by four successive sessions of presentation and discussion on planning theory, mass housing neighbourhoods, public space for reuse, and landscape transformation.

This way, chairs and speakers - mostly teachers in some architecture and planning school - had a chance to learn together, to listen to each other, to teach each other, to create a transnational community of academics interested in similar urban issues. I believe that the DOCONF conference series is an important step towards recognizing common research field, comparing research methods, and defining new ways of thinking about post-socialist urban heritage.

I would like to thank you all for being active in this DOCONF experience; working (preparing or proofreading) papers, presenting and discussing in Budapest, on 4th and 5th October 2019. And last, but not least, I would like to extend a big thank you to my colleagues and students at the BME Department of Urban Planning and Design for their contribution for the success of DOCONF2019. http://www.urb.bme.hu/en/doconf2019/

I hope that we continue the DOCONF series, this exceptional international doctoral meeting related to architecture and planning of the post-socialist urban heritage.
See you in 2021!

Budapest, 11th October 2019

Melinda BENKŐ habil. PhD
Chair of DOCONF series

PROGRAMME
4-5th October 2019

/DOCONF2019 ///

4ᵗʰ October 2019 ....

8:30-9:00   REGISTRATION
9:00-9:30   INTRODUCTION
                   Melinda BENKŐ – Chair of DOCONF / HUN
                   prof. György ALFÖLDI – Dean of the Faculty of Architecture, BME / HUN
                   prof. Miles GLENDINNING – Head of Docomomo ISC U+L / GBR

9:30-12:30 / SESSION 1 / planning theory

moderated by: prof. Miles GLENDINNING, habil. PhD / GBR
                   Árpád SZABÓ DLA / HUN
                   prof. Irina KUKINA PhD / RUS

15:00-18:00 / SESSION 2 / mass housing neighbourhood

moderated by:	Melinda BENKŐ, habil. PhD / HUN
	prof. Richard KLEIN HDR, habil. PhD / FRA
	David TICHY, habil. PhD / CZE

5th October 2019 ....

9:00-12:00 / SESSION 3 / urban space for reuse

moderated by:	Willemijn Wilms FLOET, habil. PhD / NLD
	Bálint KÁDÁR PhD / HUN
	Anna Agata KANTAREK DSc, PhD / POL

13:00-16:00 / SESSION 4 / landscape transformation

cities where speakers and chairs lived for more than three months

FULL PAPERS

The Urban Imprint of Post-socialist Projects in the Multi-family Housing of Cities in Vojvodina: between Regional Fundamentals and Local Strategies

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Abstract

Urban development in post-socialist Europe has been marked by the collision between old, mainly socialist legacy and the rise of capitalism, further supported with globalization. These new influences have made an imprint in urban fabric, bringing the well-established patterns of urban development from the West. Nevertheless, this process is not monolithic; it presents a variety of different approaches and strategies across post-socialist Europe. A good example is the new, post-socialist multi-family housing in Serbia, which is basically formed on two important pillars; the first one is the decentralized housing policy of the former socialist Yugoslavia with many local customizations; the second pillar is deregulated housing market in present-day Serbia, strongly affected by the Yugoslavian Crisis from the 1990s. Multi-family housing has blossomed in Serbia since 2000, especially in middle-size cities. The aim of this research is to present the imprint of the new multi-family residential development in six middle-size cities in the Northern Serbian province of Vojvodina, considering their location in urban fabric and relation to the other types of housing. The comparison of six showcases is a key for the final conclusions about the importance of regional post-socialist influences in housing and their adaptations to local conditions.

Keywords

Multi-family housing, zoning, post-socialist urbanism, middle-size city, Vojvodina

1 Introduction

Post-socialist transition has marked the general development of all countries in the eastern half of Europe in the last three decades. It has left an immense impact on cities in this region, shaking up their inherited urban structure with the socialist legacy, and bringing them closer to the more globalized form of western cities. In line with this process, the general urban development of post-socialist cities has reoriented towards the already established patterns of post-war urban development, such as the rise of urban sprawl, urban decline of inner city areas, division and polarization between successful new/regenerated urban projects and neighborhoods and marginalized areas with older built stock (Hirt and Stanilov, 2014).

Nevertheless, urban development in post-socialist Europe has not been monolithic; it presents a variety of different approaches, polices, and strategies. A good example is the new, post-socialist housing in Serbia, which is basically formed on two important pillars. The first one is inherited from a decentralized housing policy in the former socialist Yugoslavia, which reflected its higher standard of living comparing with the other socialist countries. The second

pillar is more dramatic – it refers to the Yugoslavian crisis from the 1990s and its consequences. The crisis fuelled a sharp weakening of urban governance, a strong influence of still unpredicted and hardly controlled property market, and a loose control on private urban projects with their negative spatial impact (Petrović, 2004). These challenges have influenced all major segments in the housing sector in Serbia after 2000. Their spatial imprint can be scrutinized under the three following stages.

Fig. 1 Illegally developed residential area at the eastern edge of the City of Sombor. The negligence in this area is visible in the lack of street pavement (source: B. Antonić)

The development of single-family housing was frequent in the first phase of post-socialist transition in Serbia, during the crisis 1990s. In accordance with the crisis

conditions, this housing was mainly developed by refugee population in the form of illegal residential settlements in peri-urban areas. Hence, it was more a simple urban growth than an urban development. After 2000 and the start of the consolidation of the urban and housing sectors in Serbia, these settlements have witnessed a decrease of popularity and general stigmatization (Fig. 1). This consequently led many of them into stagnation and shrinkage (Antonić and Djukić, 2018). Legal part of single-family residential development had a negligible role during the transition period.

Socialist multi-family housing also had a different development trajectory compared with the other post-socialist countries. As in the case of the other countries, socialist multi-family settlements and neighborhoods have aged and the necessity for their refurbishment has become evident. In Serbia and the other ex-Yugoslavian countries, a common approach to their refurbishment is market-oriented; private investors usually get a right to add an extra floor(s) as an upper extension of old, socialist buildings, which is actually their compensation for the refurbishment (Vranic et al., 2016). Many of such extensions were poorly monitored and constructed and their functional and visual appearance is more than questionable (Fig. 2). In the other side, this widespread intervention in Serbian cities indirectly shows that people still positively consider socialist residential neighborhoods as a viable place for life.

Fig. 2 The low-grade top extension of one building in Sodara Neighborhood in Pančevo (source: B. Antonić).

The third stance is related to new multi-family housing in Serbia, constructed in after the fall of socialism in 1991. The Serbian statistical office categorises every residential building with at least four apartments as multi-family housing. This type of residential development has become prevalent after 2000. Jovanović Popović et al. (2013) conclude that post-socialist multi-family residential buildings, constructed 1991-2012, make almost ¼ of all

such buildings at national level (Fig. 3). New multi-family housing is especially present in the most valuable part of Serbian cities, their historic centers, due to the rediscovery of their functional, social and visual potential during post-socialist transition (Djukić et al., 2018). Thus, this type of residential development is a key element in reshaping the entire urban structure (Antonić and Vaništa Lazarević, 2017).

Fig. 3 Four examples of new multi-family residential development in Kikinda (1), Sremska Mitrovica (2), Zrenjanin (3), and Subotica (4). All of them have a common denominator – their position in outer city core, where the protection of historic fabric is not strict and a location is still very central (source: B. Antonić).

Unexpectedly, this blossoming in multi-family residential construction has been very much present in middle-size Serbian cities, which have had problems with urban shrinkage since 2000. In this characteristic, they are more a norm than an exception in post-socialist Europe, where shrinking cities dominate, especially among small and middle-size cities (Restrepo Cadavid et al., 2017). Moreover, these cities do not possess a strong historical tendency towards multi-family housing. They preserved a sprawled structure with detached houses even during the socialist period, despite the ideological support to multi-family housing for the proletariat. The decentralization policy of the former Yugoslavia prevented strict ideological interpretations in local affairs and allowed for local adaptations of both urban and housing policies (Petrović, 2004).

The aim of this research is to present the imprint of this new multi-family residential development in urban space in Serbia. It is done by on-site investigation in six case studies – middle-size cities in the northern Serbian province of Vojvodina – where their position and concentration in urban structure are in focus. Final conclusions aspire to find how local strategies and socialist legacy in the housing

sector adapt and transform global influences in the urban space of middle-size cities in Serbia.

2 Methodology

This research is shaped as a multi-case study. Before the analysis of the case studies, the fundamentals about the urban dimension of post-socialist housing in Serbia are explained. The comparison of general knowledge and fieldwork on case studies lends to the final findings and conclusions.

Six middle-size cities in Vojvodina have been purposely selected as case studies due to their similarity: Kikinda, Pančevo, Sombor, Sremska Mitrovica, Subotica, and Zrenjanin. Their common characteristics are:

- Middle-size cities in Serbia, with 30,000-100,000 inhabitants;
- Seats of administrative districts in Serbia with similar urban functions and public facilities;
- The same modern history, since the 18th century;
- Similar urban genesis since the start of the modern era, i.e. since early industrialization in the late 19th century;
- The same position in relation to Serbian system of urban planning. All cities require general urban plans for their urban development, which is not the case in smaller cities.

3 Results

The analysis is based on the on-site investigation of the location of new multi-family housing buildings (built 1991-2017) in a built-up area in six selected cities. Their location is further analyzed regarding several important parameters of urban development:

1) The location, relating to urban centers / historic cores;
2) Their location in old, socialist multi-family areas and neighborhoods. The minimal size of such neighborhood is three buildings with open public space between them;
3) The location relating to industrial zones;
4) The concentration of new multi-family buildings.

All buildings identified by on-site investigation were collected and mapped. They are marked as red dots in the urban area (Fig. 4). In total, there are 199 buildings:

Selected city	Number of buildings	Number of buildings in historic core	In %
Kikinda	8	7	87%
Pančevo	44	22	50%
Sombor	26	10	38%
Sremska Mitrovica	58	26	45%
Subotica	72	35	49%
Zrenjanin	27	15	56%

Table 1 The number of post-socialist multi-family buildings

Thematic maps are even more illustrative regarding the trends in new multi-family housing:
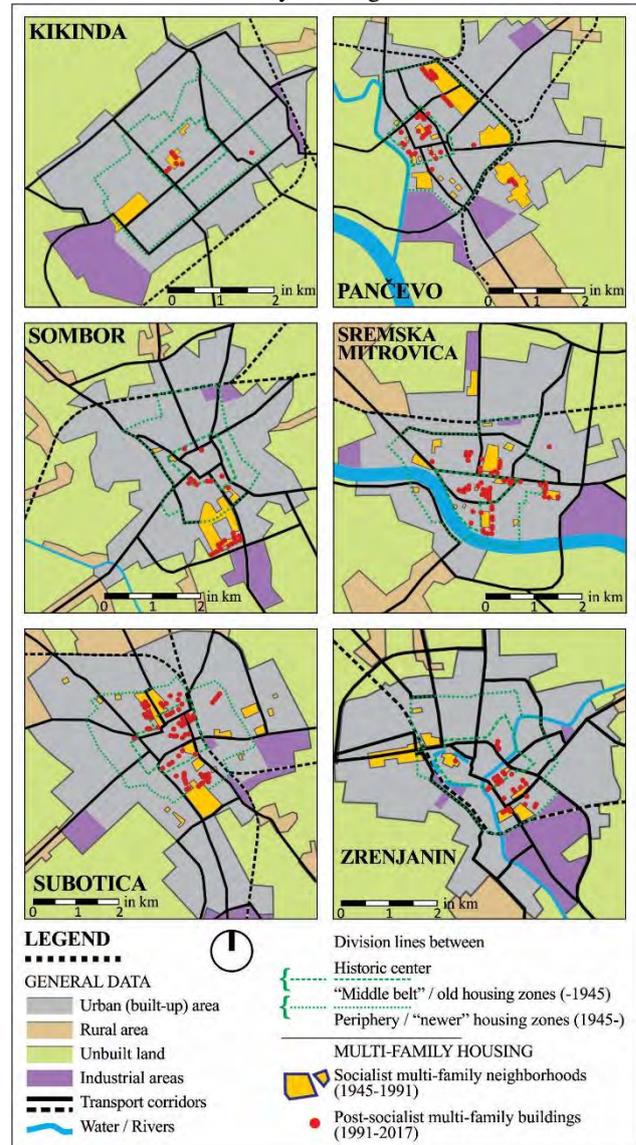
Fig. 4 Maps of multi-family residential buildings from the period 1991-2017 in selected cities in Vojvodina (author: B. Antonić).

The main findings regarding the number of new multi-family residential buildings in the six selected cities in Vojvodina basically confirm that this type of post-socialist housing is becoming very present in Serbian cities. Thus, in the case of Sremska Mitrovica with approximately 38,000 inhabitants, more than 50 new buildings have been built in the last 25 years. Pančevo and Subotica show similar trends; there are 72 and 44 new buildings, respectively. Nevertheless, the number of new multi-family buildings in these cities is smaller given their size. In the other side, on-site investigation acknowledged that new multi-family buildings in both Subotica and Pančevo are bigger and taller than in Sremska Mitrovica.

The number of new buildings is smaller in Zrenjanin, Sombor, and, in particular, Kikinda.

4 Discussion and conclusions

The further examination of identified new, post-socialist multi-family buildings in the six selected cities in relation to theoretical fundamentals, opens more complex conclusions. They are linked with the distribution and concentration of these buildings in the context of the whole urban area, as well as regarding demographic indicators within the process of the aforementioned urban shrinkage.

First, it is obvious that there is a tendency in new multi-family construction towards more central locations. Despite this, new buildings are rare in inner historic centers. This is especially true in the case of Sombor and Zrenjanin. Obviously, protection measures for the well-preserved inner historic cores of cities of Vojvodina have mainly prevented new construction. An exception is Pančevo, where its historic core was significantly transformed during the socialist period. Hence, this is a continuation of the previous urban and housing policy. A different example is the historic core of Subotica, whose eastern half has been recently transformed, but as a novelty in development.

The second and more unexpected conclusion is that new multi-family buildings are often located in or around older, socialist multi-family areas and neighborhoods. Actually, the most frequent location of new buildings is between inner city centers and the biggest multi-family neighborhoods from socialist period. This indirectly underlines that these socialist neighborhoods are still popular for living in Serbian cities.

In contrast with the attractiveness of the previous urban zones, the relation to industrial zones, situated at the edge of the urban area, is totally invisible. The only exception is Sombor, where half of new buildings is located at the southern edge of urban area. The reason for this unusual position is that a big plot of unbuilt public land was, already designated for multi-family housing in the last years of socialism.

Last, the tendency towards the concentration of new multi-family residential buildings in one ambient, street or urban block is also observable in all cities. In these cases, the influence of some important urban node (riverside, the main park, district hospital) seems to be crucial.

All these conclusions clearly imply that multi-family housing boomed in the six selected cities in Vojvodina, during post-socialist transition. Comparing this increase with their demographic decline, it is obvious that there is a gap in urban development. However, more complex explanations, further interpreted within wider patterns, regional development in post-socialist Europe, can be added. First, housing has ceased to be just a necessity; it has become a commodity or, even, a "safe haven" for investment in the course of the rise of the market. Therefore, attractive locations in historic ambient, around parks or along riversides, have become an imperative for new buyers. Similarly, the transition from a socialist economy, based on industry, to a post-socialist economy, dependent on services, has brought the new nodes of concentration, including historic cores or big-format services, such as hospitals.

The deeper meaning of these concentrations also underlines the basic importance of urban densities; both historic centers and socialist neighborhoods represent the zones in the cities with a higher concentration of dwellers and facilities. Hence, they are currently the most active poles of urban development in cities. To conclude, the localization of new multi-family housing in these areas profoundly highlights the rise of the market economy, based on rational decisions regarding desirable locations to live in post-socialist cities.

References

Antonić, B., Djukić, A. (2018) "Phenomenon of the Shrinking Illegal Suburbs in Serbia: Can the Concept of Shrinking Cities be Useful for their Upgrading". Habitat International, 75, pp. 161-170. https://doi.org/10.1016/j.habitatint.2018.03.010.

Antonić, B., Lazarević Vaništa, E. (2017) "Survey-Based Research as a Scientific Answer to the Deficiency of Qualitative Data regarding Micro-Urban Level of New Multi-Family Housing in Serbia", Facta Universitatis – Series: Architecture and Civil Engineering, 15(1), pp. 29-41. https://doi.org/10.2298/FUACE170202001A.

Djukić, A., Stupar, A., Antonić, B. (2018) "The consequences of urban policies in socialist Yugoslavia on the transformation of historic centres: the case study of cities in Northern Serbia", Journal of Housing and the Built Environment, 33(3), pp. 555-573. https://doi.org/10.1007/s10901-018-9612-7.

Hirt, S., Stanilov, K. (2014) "Twenty Years of Transition: The Evolution of Urban Planning in Eastern Europe and the Former Soviet Union, 1989-2009", UN Habitat, Nairobi, Kenya.

Jovanović Popović, M., Ignjatović, D., Radivojević, A., Rajčić, A., Ðukanović, Lj., Ćuković Ignjatović, N., Nedić, M. (2013) "Atlas of Multifamily Housing in Serbia", Faculty of Architecture and GIZ, Belgrade, Serbia.

Petrović, M. (2004) "Социологија становања – стамбена политика: изазови и могућности [Sociology of Housing – Housing Policy: Challenges and Opportunities]", ISI, Belgrade, Serbia.

Restrepo Cadavid, P., Cineas, G., Quintero, L., Zhukova, S. (2017) "Cities in Eastern Europe and Central Asia: A Story of Urban Growth and Decline", World Bank, Washington, DC, USA.

Vranic, P., Vasilevska, Lj., Haas, T. (2016) "Hybrid spatialities: Multi-storey extensions of socialist blocks of flats under post-socialist transition in Serbia, the case of Nis", Urban Studies, 53(6), pp. 1261-1277. https://doi.org/10.1177/0042098015571887.

Kharkiv Housing Estates: Socialist Past and Post-Socialist Present

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Abstract

The history of Kharkiv's housing estates (in the form we see it today) starts in the mid XX century, the time of revolutionary change in residential development not only in Ukraine but in many other countries of Central and Eastern Europe. The new housing paradigm is no longer a subject to the traditional perception of architecture, now it serves political and economic challenges of "the greatest empire" of the XX century – the USSR. The decisions that were made by Party leaders in a few years of the 1950s completely changed the face of the cities in CEE region. Kharkiv, the second biggest city of Ukraine, was not an exception. In fact, it has become a testing ground for many bold ideas of the new generation of socialist architects that were later spread and implemented in other parts of the big country. Pavlovo Pole and Saltovskiy housing estates were among the first urban and architecture projects to implement these ideas to the real life. After the break of the Soviet Union in 1990s, the city has faced a new reality and stepped into the new, transition phase of its development. As many other post-socialist cities, Kharkiv struggles with self-identification in urban development caused by numerous political, economic, and social contradictions. Apparently, these processes have a great impact on the residential development in economic, urban, and architecture spheres.

Keywords

Micro-district, panel housing, housing estate, self-sufficient city, post-socialist, transition period

1 Introduction

Followed by the post-war residential crisis, a new era of modernist mass housing construction has begun in the Central and Eastern Europe (CEE). By mid-1950s the process of national industrialization was completed de jure, giving place to housing which became the dominant development project in the USSR. It had a purely utilitarian goal, i.e. resolving the so-called "housing question" as soon as it was possible. That is why the architectural method that had been actively developed after the war evolved into an experimental search for efficient standard designs, where the main criterion for approving design proposals was their technical and economic efficiency (Bouryak et al., 2017).

Early 1950s were crucial for the entire Soviet residential and urban design. Not only Kharkiv (Kharkov before 1991) but basically every city and small town of the former Soviet state was doomed to accommodate a new typology of housing utopia – panel housing. In his book "Belyayevo Forever" Snopek (2013) describes an unprecedented historical moment – the speech of Nikita

Khruschev on December 7, 1954, where he manifests the new strategical goal for the Soviet construction industry, the goal to create a cheap and yet functional residential environment for the soviet people.

Not long after that, Kharkiv together with many other soviet cities has become a testing ground for this socialist experiment. Among numerous new residential districts constructed between 1955 and 1993 in Kharkiv, two of them deserve a special attention – Saltivskiy and Pavlovo Pole housing estates. Both of the projects were pioneering in many new urban approaches, that were later used in other districts of Kharkiv. Pavlovo Pole was the first district in the city to adopt the idea concept of so called micro districts, while Saltivskiy housing estate has used a new focusing method for public and transport functions distribution.

2 Pavlovo Pole – a testing ground for the socialist housing experiment

Kharkiv was not an exception to the new housing policy of USSR. Unfortunately, Kharkiv experience of mass industrial development practically is not studied

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(Meerovitch and Frantseva, 2017). However, this experience deserves special attention. Unlike other Ukrainian cities, an original architectural school had emerged here back in 1920s-1930s (Horoyan, 2015). In addition, two consecutive projects, namely Pavlovo Pole (1956- 1974) and Saltovskiy housing estates (1963-1993) (Fig.1) were implemented under the guidance and according to fundamental design proposals made by the same architect - Leonid Tyulpa (1922-1994) (Bouryak et al., 2017).

Fig. 1 Residential house-building practice development in Kharkiv:
1 – Pavlovo Pole; 2 – Saltovskiy residential area; red dashed zone –
Kharkiv historical center

Source: Shpara P. *Perspektivyi razvitiya Harkova* [Development prospects of Kharkov] // Kyiv: Stroitel'stvo i arkhitektura 3 (1964), p. 4.

In 1956, Leonid Tyulpa begun to work on a number of large housing estates architecture and urban projects in Kharkiv. His first project of that type was Palovo Pole housing estate. It became a testing ground in Kharkiv, where the method of "micro-districts" was tried for the first time. The first layout of Pavlovo Pole housing estate was developed by Kharkorproekt Urban Planning Institute (architects B. G. Klein, A. S. Proskurnin, A. P Pavlenko) back in 1945 and by 1954 several two-story apartment buildings had already been erected in the eastern part of the district. The district had a linear development along the Lenina Avenue (Naulovyi Ave. today). According to Tyulpa's design proposal, Lenin avenue (Fig. 2) was no longer a busy highway that was going beyond the city. Instead, it was expected to approach the central square and make a gentle turn as it was going around the housing estate. In this way a major thoroughfare was transformed into a forest road that led to the so- called "recreational places" in the forest (Bouryak et al., 2017).

Likewise, its first prototypes in Moscow (Cheremushki and Belyayevo districts) the master plan of Tyulpa for Pavlovo Pole follows the principle of dividing the living area into functional zones – micro-districts. Snopek (2013) defines micro-district as a basic urban unit formed by a number of residential houses located around major public facilities (school, kindergarten, etc.).

Fig. 2 Design scheme of Pavlovo Pole District (1956).
Source: Grigorenko A., Tyulpa L. *Planirovka rayona Pavlovo pole v g. Khar'kove* [Planning of the Pavlovo Pole in Kharkov], Kyiv: Stroitel'stvo i arkhitektura 7 (1958), p. 8.

L. Tyulpa and L. Grigorenko divided the whole territory of Pavlovo Pole housing estate into micro-districts of approximately 50-70 ha each. It was divided into 5 residential blocks for 1,900 – 2,700 people in each. These blocks consisted of 6-8 slab apartment houses and two apartment houses for small families with the so-called corridor- type planning. Each micro-district was designed following the "open plan" principle, meaning that the proposed architectural forms referred to such concepts as "coziness", "affordability" and "naturalness". In the center of each micro-district there were schools and day-care centers, which were grouped around gardens. Miscellaneous retail outlets, as well as social and utility infrastructure facilities (shops, canteens, laundries, garages, etc.) were located along the boundaries of these micro-districts. Apartment houses were accessed via a network of dead-end driveways within the block. The housing estate could be conveniently accessed by various kinds of public transport, such as trams, trolleybuses, buses and taxi (Bouryak et al., 2017).

3. City within the city or Saltivskyi housing estate

After a successful implementation of Tyulpa's ideas on a test ground of Pavlovo Pole, a new, more ambitious project of Saltivskyi housing estate came by. The original idea of Saltovka (jargon name of the district) was to create a self-sufficient satellite city, as a juxtaposition to the Kharkiv historic center. It was supposed that Saltovka will have its own public core, good transport network, sufficient residential and public facilities. For the good or bad, the district has never become an independent city and is still functioning as any other administrative part of Kharkiv.

The uniqueness of this project was not just in the use of new types of panel houses with greater height (9-16 stories), but predominantly in the pioneer urban layout, based on the transport and accessibility convenience. The so-called "focusing" method was employed for the detailed planning of residential blocks, which was used in the Ukrainian Soviet Republic for the first time. The main idea behind this method was placing social and utility infrastructure facilities around public transport stops. Public transport stops became the primary elements of social and utility infrastructure network. This method made it possible to enlarge the grid of major thoroughfares, to reduce the number of intersections, to increase the distance between transport stops to 800-900 meters, to reduce the number of stops, and to increase the overall speed of traffic by 20%. The "focusing" method fully complied with the principle of the "micro-district" (Fig.3). By means of employing this principle, a micro-district was not limited to the streets, but it became organized around the "focus", i.e. the radius of accessibility (Bouryak et al., 2017).
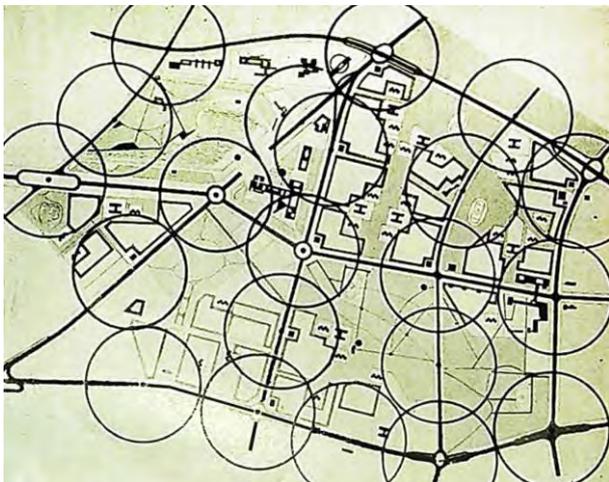
Fig.3 Residential area no.5. "Focusing" layout.. Source: Tyulpa, L. *Novyie planirovochnyie resheniya v zastroyke Saltovskogo massiva* [New planning solutions in Saltovsky residential development], Kyiv: Stroitel'stvo i arkhitektura 3 (1973), p. 3.

The area followed a clear functional diagram: residential groups were located in the vicinity of public transport stops (fig. 3) and social and utility infrastructure facilities; retail outlets and other facilities were located along the thoroughfares and near public transport stops; schools and kindergartens were placed in green areas in the core of the micro-district (Bouryak et al., 2017).

Besides the fact that Saltovskiy housing estate was the largest panel housing residential area in the city (with a population 410 thousand people, 2018), it was not the only development of that type being constructed after Pavlovo Pole pioneer project. In fact, both Pavlovo Pole and Saltovskiy housing estates were the test projects for another districts in the growing city. Alekseevskiy, Novyie Doma, Gorizont were among the many rapidly expanding architecture and urban masses that in terms created a new face of Kharkiv.

4 Kharkiv post-socialist present

When in 1990 Ukraine got its independence from the Soviet State, Kharkiv, as many other cities stepped into a new era of its architecture and urban development. The era that by many urban researchers is called "post-socialist". Like other post-socialist cities with similar background, Kharkiv struggles with uncontrolled and ideologically free development in residential sector. According to Stanilov (2007) post-socialist cities in CEE countries share common urban development issues. Much of the real estate investors' attention has been concentrated in the city centers, prestigious neighborhoods, and, most of all, in the suburban periphery where rampant commercial and residential construction has obliterated the landscape, blurring the once well-defined urban edge. Many of the remaining urban areas that are less appealing for developers have been left to age not very gracefully, most notably large socialist housing estates forming a discontinues ring around the inner city. Indeed, socialist residential heritage was neglected by all the stakeholders: developers, municipality, citizens, and architects. There are many reasons for that, but the key-factor is economic disadvantage. Any reconstruction of socialist panel housing in Kharkiv, as in other Ukrainian cities, is more expensive than new construction. Consequently, people who have finances to buy a new apartment prefer newly built housing estates to the old socialist housing. However, the quality of new housing is very precarious. It's often susceptible to market speculations, corruption, and even fraud. Being a subject to developers' business

game, such "architecture" doesn't offer a sufficient increase of architecture and urban quality. Under the surface of the new facades, residents may find non-functional apartment design, dark corridors, non-accessible staircases for disabled people, and many other issues that people are usually fixing themselves after moving in. In terms of urban design these residential complexes are no better than their predecessors built in USSR. Parking zones, playgrounds, green spaces (Fig.4) are often randomly placed just to comply with so-called Ukrainian building codes – "ДБН". Many of the newly built houses are constructed in the old tissue of the socialist micro-districts.

But not only urban and technical aspect of a new housing is problematic, it is also an architecture and aesthetic value of these buildings. Panel houses of the Soviet time were and still are not the objects of architecture value and preservation. However, by looking at the housing of that period from the perspective of functionality and understanding social and political context of the time it was built, the question of subjective beauty shifts on the second place. In fact, beauty was not the goal of such architecture, it was serving other purposes. This cannot be said about the new housing construction. Being formally same panel houses from inside, their distinctive feature is the new envelope, which stylistically refers to classic architecture or visually reiterates separate elements of contemporary Western housing (Mysak, 2016).

Fig.4 New housing estate on Pavlovo Pole.
Source: https://glavnoe.ua/news/n317762-
novostrojki_ekonomklassa_ot_respekt_strojinvet

However, it is fair to mention that a small number of good housing projects is still present on the market. Stanilov (2007) describes this phenomenon as follows. The lack of clear vision about how cities should grow, which dominated the early years of the transition period and was used by many private developers to maximize their short term profits, is currently bemoaned not just by the residents, who were left with the short end of stick,

and municipal authorities, who find it difficult to service the chaotically developed urban areas, but by the private investors themselves, who have found out that the good urban planning can improve the marketability of their products and, ultimately, increase their profits.

5 Conclusion

The XX century residential and urban development in Kharkiv is a history of ambitious projects, innovative ideas, and big scale architecture experiments. With the break of USSR in 1990s, Kharkiv, as a post-socialist city, is seeking its new identity. This paper gives an overview of the largest housing estates built in Soviet Kharkiv and their present condition in the modern Ukraine. The paper opens two problems: 1) socialist housing heritage and its adaptation to the changing economies; 2) sustainability of the new residential construction since 1990s.

Both issues should be further analyzed in the context of broader social, political, and economic transformations specific to Ukraine today. But one thing is certain – the sustainable development of post-socialist cities like Kharkiv is impossible without clear politics in regard to the previous urban layer of modernist landscape. Mistakes of the past urban and architecture design paradigm should be acknowledged and excluded from the present practice. On the other hand, the value and the potential of the prevailing urban context should be used and enhanced by the new construction.

References

Bouryak A., Lavrentiev I., Antonenko N. (2017) "Leonid Tyulpa. The architect of soviet period of mass industrial development". Núm. 8 (2017): Ciudades y formas urbanasas. pp. 3-16 https://doi.org/10.26754/ojs_zarch/zarch.201782153 [DOI]

Хороян Н. П. (2015) "Харківська архітектурна школа у період формування й становлення: кінець ХIХ -перша третина ХХ ст, Horoyan N. P. (2015) "Kharkiv School of Architecture in the formation period: the end of XIX- the first third of XX century". Thesis for PhD degree. (in [Ukrainian])

Meerovitch M., Frantseva Y. (2017) "Problems of complex regeneration of residential area of the regions of large-panel development. Possibility to adapt German experience to social, economical and law conditions of the countries of CIS". Proceedings of Universities. Investments. Construction. Real estate, vol. 7, no. 1, pp. 120–130.

Мисак Н. (2016): *„Надмірності" в архітектурі багатородинного житла у Львові від 1956 року і дотепер: трансформації при зміні контекстів.* Liublin, Rocznik Lubelski T. XLII, 165-177 [Mysak, Natalia (2016): *"Superfluities" in the Architecture of Multi-Family Housing in Lviv from 1956 until the Present: Transformation in Changing Contexts.* Rocznik Lubelski, T.XLII, pp 165-177.] (in [Ukrainian])

Snopek K. (2013) „Belyayevo Forever: preserving the generic" Strelka Press.

Stanilov K. (2007) „The post-Socialist City: Urban Form and Space Transformations in Central and Eastern Europe", pp 5-1

Influence of Transportation Networks in the Planning of Marzahn, GDR and Petržalka, ČSSR

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Abstract

Most contemporary studies dealing with socialist cities concern aspects of architecture or urbanism, mainly regarding panel housing estates and rehabilitation of historical buildings and the discourse is usually centered within their own national boundaries. Discussions and comparisons of infrastructural transportation networks as important elements defining socialist cities are still nascent. This paper investigates the aspects of how, due to different transportation planning policies in the 1960s and 70s, they determine the layout and structure of the mass housing estates of Marzahn in East Berlin and Petržalka in Bratislava. The adopted methodology includes an urban morphology study deploying maps and diagrams obtained from national archives, educational institutions or published architectural journals from the former German Democratic Republic (GDR) and Czechoslovak Socialist Republic (ČSSR), as well as interpretations from various secondary literature. This paper concludes that, in regards with the historical and political context, there were more public transport connections and the idea of the compact city was more dominant in East Berlin compared to Bratislava, which became more auto-oriented and fragmented as the result of the Czechoslovak highway network policy. This inadvertently affected the present day development of Marzahn and Petržalka respectively.

Keywords

Socialist urban planning, transportation networks, mass housing estates, mobility infrastructure

1 Introduction

According to Dimitrou (1992) the city is a 'dynamic interface machine of movement (transport), channels of communication (including information) links, serving activities accommodated by the settlement.' If we highlight the transportation networks of a city plan, we can perceive how far these channels influenced the planning of these housing blocks.

Likewise, the form and distribution of the 1970s mass socialist housing estates of Marzahn in East Berlin and Petržalka in Bratislava were greatly influenced by different types of transportation networks. Bratislava was important to the ČSSR because, not only was it the capital of Slovakia, but also due to its proximity to the Austrian border whereas East Berlin was a divided city, with the other half belonging to West Germany. Both cities must develop as exemplary socialist urban planning examples to their Western peers. In the 1970s, both regimes initiated large housing building programs in parallel with the construction and retrofitting of transportation networks, as evident with Marzahn and Petržalka.

Current scholarship on planning history underestimate the effect that transportation networks have in shaping the layout and fabric of cities. While existing publications exist acknowledging the role of mobility infrastructure in shaping urban development (Tuvikene, 2018, Marvin and Graham, 2001), as well as the impact of transport planning policies in post-socialist countries (Pucher, Buehler, 2005), there is still a lack of comparative urban studies of this aspect between former socialist cities. Publications on large CEE housing estates focus on static urban spaces rather than the connections that bind and in some aspects, configure these spaces together. While it is true that the tracks prepared for cranes and large machineries during construction determined their urban forms, the forces of communication networks also shaped their urban patterns. The degree of this integration within the housing estate has therefore paved the way for its future urban development during the post-socialist era. Thus, this paper seeks to ask the following research questions; 1) How did the planning of new and renewal of old transportation networks determine the urban fabric of

the Marzahn and Petržalka? 2) What were the reasons for these different approaches? In this contribution, I will substantiate these questions with not only maps and diagrams, but also their respective historical and political context that attributed to these differences.

2 Marzahn, GDR

Marzahn is flanked by the north-south artery Märkische Allee along the western edge and the main collector road that runs across it, Landsberger Allee, connects the city centre directly to the Autobahn ring. The S-Bahn tracks which were laid out separately according to the 1941 plan of Berlin, merged with the arterial road Märkische Allee by the time Marzahn was realized in 1976.

The integration of public transportation networks was negotiated at the turn of the 20th century, accompanying the urban expansion of Berlin in the 1920s and 30s during the Weimar Republic. Various types of public transportation Berlin were already operating under one large organisation, the *Berliner Verkehrs-Aktiengesellschaft* (BVG) in 1929 and during the Third Reich, the Autobahn system expanded to include the main axes as well as outer radial rings. By the time the city split and the GDR ruled East Berlin, they had already inherited a complex system of integrated public transportation and highway networks they could already incorporate into their city planning.

Following the success of their first large building project in Stalinallee, to boost its image further especially to West Germany, the GDR regime avowed to create a shining example of a socialist city of East Berlin. They did this by not only rejuvenating the city centre in late 1960s with new additions and restoration of existing buildings, but also by providing sufficient accommodation for their citizens, through the 1973 Housing Building Programme. The industrial location of Lichtenberg Nord-Ost promising potential job opportunities and technical supply facilities made it attractive to allocate a large residential settlement within the plots north and south of the original village of Marzahn, as evident in the 1970s General Development Plan (Fig.1). Thus, the servicing of the city centre and construction of prefabricated panel housing on the periphery meant an upgrade and retrofitting of the existing infrastructural networks to ensure efficient traffic and accessibility options. The 1976 General Traffic Plan of East Berlin indicated new and planned improvement of tram and S-Bahn lines to facilitate these newly planned housing estates.

The GDR experienced a rise in car ownership and mobility after the 1970s, hence the traffic engineers of the GDR continued to be pragmatic in their approach by improving radial road networks with the planned *Tangentialverbindung* (tangential connections) to effectively distribute traffic throughout the main city areas (Krenz, et al., 1969, p.38).
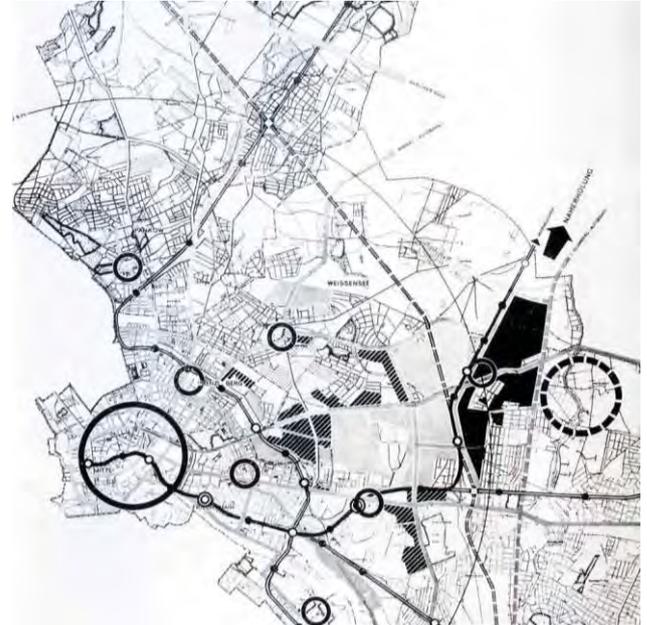
Fig. 1 Generalbebauungsplan showing the integration of public transportation networks with the development of new housing settlement of Marzahn, area shaded in black. Source: Korn, Schweizer, Walter (1976): 9. Stadtbezirk in Berlin. In Architektur der DDR (9), p. 549

Fig. 2 Plan of the Public Transport System that would eventually be merged with the main road networks. Links to the city centre were already in place before Marzahn (large shaded area on the right) was conceived 4 years after this plan. Source: Magistrat von Groß-Berlin, Bezirksbauamt, Bereich Städtebau und Architektur, Berlin: Hauptstadt der DDR, Generalbebauungsplan, Generalverkehrsplan, 1969, (10) Plan Öffentlicher Personennahverkehr

Notwithstanding the meticulous planning, obstacles stemming from economic problems and deterioration of materials prevented smooth construction of these S-Bahn and tram facilities, thus in the 1980s the residents in East Berlin still lacked sufficient public transport connections. Nevertheless, when Berlin was reunited, the whole infrastructural network was successfully bridged, allowing continual urban development of Berlin.

3 Petržalka, ČSSR

In Bratislava, the system of trams and railway had already existed during the Austro-Hungarian Empire since the establishment of the first tram route in 1895. While the tram networks also expanded in Bratislava during socialism, the ČSSR regime from the late 1960s to 80s embraced the construction of the automobile infrastructure, which dominates the urban landscapes of Bratislava to this day.

As one examines the current view of Petržalka, the city's largest housing estate, its edges were formed exclusively by highways, from the north to its eastern and western boundaries, running across the Danube via four bridges. The importance of properly integrating transportation network, particularly highway infrastructure, was one of the main issues, besides the technical hydrological subject, highlighted during the evaluation of the Petržalka urban planning competition (Gross, 1969).

The most prominent bridge is the Most SNP, which was the first modern socialist bridge constructed in 1967-72 after the reconstruction of the old bridge Stary Mesto. The former played a crucial role in speeding up the construction process of Petržalka, followed by two more bridges, Prístavný Most and Lafranconi Bridge, completing a highway loop, allowing high-speed, cross-country traffic to bypass the city centre of Bratislava. Alongside the roads, there are railway tracks that cut across the middle of Dvory, an upgraded infrastructure left by the former Austro-Hungarian regime when Petržalka was just a separate village, but Petrzalka still lacks intra-urban rail infrastructure. The approved schematic plan of Petržalka in 1976 revealed a proposal to incorporate an underground metro system running parallel with the north-south canal in the centre linking the old city of Bratislava to the southern end of the housing estate. However, this was not realised due to economic and technical circumstances, though from the very beginning, it seems evident that highway infrastructure would be the exoskeleton of the formation of Petržalka. With the rise in car ownership, though it did not happen

exponentially until after 1990, highway construction took precedence. As for today, in terms of public transport, the residents are reliant mostly on buses that run on convenient routes around the estate while the trams only terminate at the north.
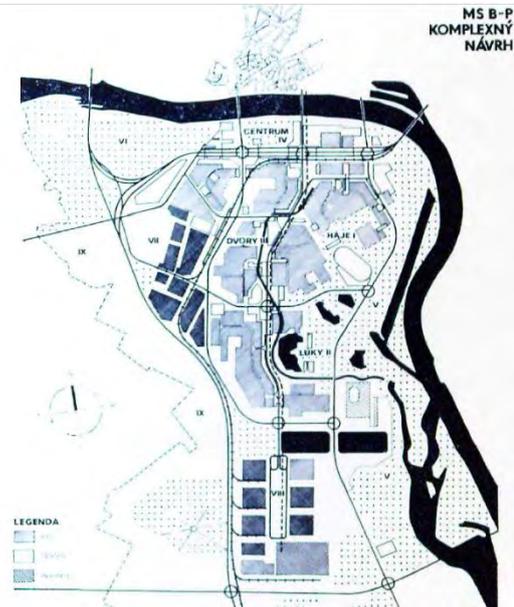
Fig. 3 Approved authorised plan of Petrzalka highlighting the significance of the highway networks forming the layout of the housing estate, followed by planned metro line and railway tracks. Source: Výstavba Petržalky by Stanislav Talaš, Architektura ČSR p.19-23, Issue 1/1978
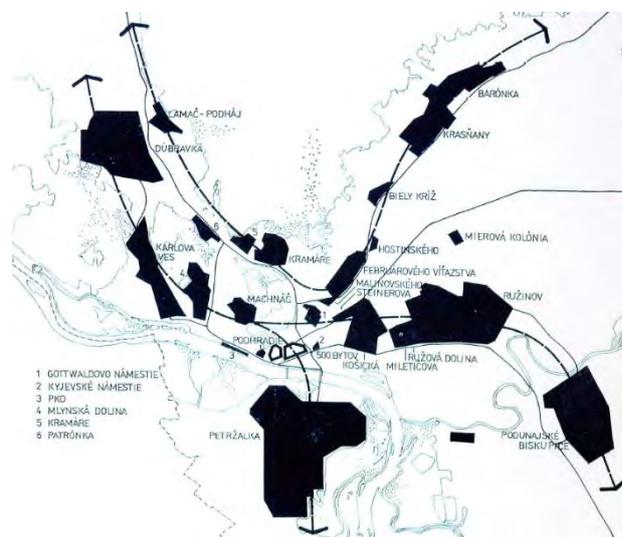
Fig. 4 Location of new residential developments following the expansion of the highway networks throughout ČSSR. Source: Zalčik, Architektura ČSR 1/1978, p.5

Simultaneously with the government-approved 'Slovak Socialist Republic Urbanisation Project' to ensure a more coherent urbanisation of Slovakian cities, (Michalec, 1976) the modernisation and construction on the Prague-Brno-Bratislava highway began in the late 1960s, allowing better connections with the Czech cities (Šteis,

Hulej, 1989). Adversely, the conditions of the ČSD railways deteriorated and was in dire need of repair in the last two decades of ČSSR (Nigrin, 2018) while there was an improvement in auto mobility infrastructure. By providing standardised roads and communication grids covering different regions and territories, improving nationwide access to these needs thus legitimised the power and concept of a united ČSSR.

4 Conclusion

As much as the provision of mobility infrastructures were about modernity, for the former state socialist countries they were also symbolically an assertion of the state power as provider, creating a cohesive nationwide circulation system between the nodes, i.e. the cities. Consequently, they were crucial in the formation and urban structure of the mass housing estates built on the peripheries of cities. In the 1985 Directional Plan of Bratislava, the national economic plans instructed that the sites where new housing estates were located must be concentrated in areas that would utilise the efficiency of the built highway systems (Hauskrecht, 1983). In this case, not only do the mobility infrastructure serve these housing estates, but also the construction of these estates seem to serve the purpose of these infrastructures.

These legacies further inscribed in the current form of cities provide opportunities yet also limitations in the contemporary urban processes during the transformation.

For instance, in Berlin the merging of the public transport system was possible along with the development of further commercial areas and the effective distribution of traffic in Marzahn. The roadway links *Tangentialverbindung* proposed by GDR traffic engineers was only partially built during the regime and its construction is ongoing. Furthermore, values of land near important transport hubs were much higher. The shopping mall Eastgate Berlin replaced the former shops and post office on the land between the intersection of Landsberger Allee and S-Bahn station, as it was deemed more profitable.

As for Petržalka the delayed plans for public transportation and transition to market economy further encouraged private investors to build condominiums, offices and shopping malls, often acting not in the interest of the local community. Aupark which was established in the north attracted not only residents of Petržalka but also many people from other parts of Bratislava due to its proximity to the old city and accessibility from the highway intersection. In addition, residents in the south of Petržalka became more isolated as Bratislava became more auto-oriented, as an effect of the former socialist regime transportation policies.

References

Bodenschatz, H., & Polinna, C. "100 Jahre Groß-Berlin: Verkehrsfrage und Stadtentwicklung." Lukas Verlag für Kunst- und Geistesgeschichte, Berlin, 2018.

Graham, S., & Marvin, S., "Splintering Urbanism: Networked Infrastructures, Technological Mobilities, and the Urban Condition." Routledge, London, 2001.

Gross, K., *Medzinárodná súťaž Bratislava-Petržalka*, Vydavateľstvo Slovenského fondu výtvarných umení, Bratislava, 1969

Hauskrecht, J., "Nad územným plánom hl. mesta SSR Bratislavy". In: Projekt (4-266), 1983, p.2.

Krenz, G., Weidner, C., & Stiebitz, W., "Städte und Stadtzentren in der DDR: Ergebnisse und reale Perspektiven des Städtebaus in der Deutschen Demokratischen Republik." DDR: VEB Verlag für Bauwesen., 1969

Michalec, I., "Metóda technika a nástroje územného planovania v podmienkach nášho socialistického zriadenia". Slovenskej akademie vied., Bratislava, 1976

Nigrin, T. "Planned Stagnation? The economic plan vs. reality in the Czechoslovak railway sector of the 1970s and 1980s." Review of Economic Perspectives (18), 2018, pp. 61-76. doi:10.1515/revecp-2018-0004

Pucher J., Buehler, R., Transport Policies in Central and Eastern Europe. Rutgers University, Available online under https://www.vtpi.org/PucherCentralEurope.pdf, 2005

Šteis, I., Foreword. In Milan Hulej (Hrsg.), "Stavebníctvo na Slovensku 1945-1985: Dopravné stavby". Alfa, Bratislava, 1989

Tuvikene, T. "Post-socialist (auto)mobilities: Modernity, freedom and citizenship." Geography Compass (12)., 2018, DOI: 10.1111/gec3.12362

Residential Cluster Redevelopment of Post-Soviet Mass Housing Neighborhoods in Armenia

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Abstract

Nowadays the issue of providing houses to the population is urgent all over the world. Buildings of varying degrees of physical and moral consistency make up a significant proportion of the existing housing stock, so a solution of the problem is considered through restructuring of existing structures and adapting to current requirements and newly built housing stock.

Based on the normative requirements of urban development of residential districts of the Republic of Armenia, especially in the post-Soviet period, mass residential development was carried out on a unique principle: bedroom communities with three-level service facilities.

Now, the challenges of sustainable urban planning in the post-Soviet period, with the introduction of new environmental opportunities - resource saving, alternative energy sources and use of new building materials - imply the use of new approaches to alignment of clusters with the design of the above-mentioned layout locations with a mixed use zones. This implies a restructuring of the cluster model, both in a coordinated, interconnected, economical way, as well as in the complexity of the urban environment and the aesthetic character of the units, which is based on the structured and planned residential-public junctions, public spaces, and systematic functional networking.

Keywords

Residential cluster, mass housing neighborhoods, social housing, sustainable development

1. Introduction

Currently, the massive residential construction formed in the territory of Armenia during the Soviet era carries the legacy of post-war massive construction. Based on the solution of the problem of the short-term recovery of residental stock's significant loss and the urgent need to provide the population with an urgent accommodation, massive house constructing with the specific design which was typical for all Soviet Union countries of that period and the use of factory assembly elements became widely used.

During this period, two main types of fast-growing economical buildings were formed (Khrushchev buildings):

• Temporary housing solutions subject to dismantling with short-term operation (25 years) and minimum thresholds;

• Buildings with a longer life (up to 50 years).

Subsequently, the service life of most of the above mentioned structures was extended to 100 years.

The typical mass-housing development of Soviet Union period occupied significant areas in almost all cities. Implemented on the basis of the same prototype projects, they had the same layout and spatial resolution, without even taking into account local features (climatic conditions, art features, building materials, etc.), depriving entire residential districts the opportunity to have unique architectural features.

In Soviet period, the layouts of settlements that were developed or formed in the Soviet era were formed in the form of a unique cluster system, in the form of self-sufficient three-level service districts, with clearly separated operational zones. In some settlements of the Republic of Armenia, there was a deviation from the stated pattern. Residential units formed in the form of single self-contained clusters-micro-districts or districts, were distinguished by their unique architectural and artistic character, integrating with the local landscape

conditions and bearing the peculiarities of local construction style due to the use of unique, local building material.

2. Main concept

At present, in the most valuable sections of the town planning layout, a situation has recently emerged. In the Soviet housing segment of the urban housing stock, there were separate development units or complexes meeting the new requirements without global structural changes, while maintaining the infrastructure components that met the former housing fund requirements. Very often in this process the public green areas are being reduced and thereby worsening the environmental situation within the residential cluster for residents. These phenomena create dissonance both in terms of the integrity of urban planning and the artistic harmony, as well as in the convenience of functionality and the security component (fig.1).

Accepting mass construction in a number of countries as the main base of emerging urban development units, numerous economic planning approaches have been developed and tested for them. In our country, due to the shortage of non-profit-owned apartments, the notions of middle-income beneficiaries and social housing have been identified.
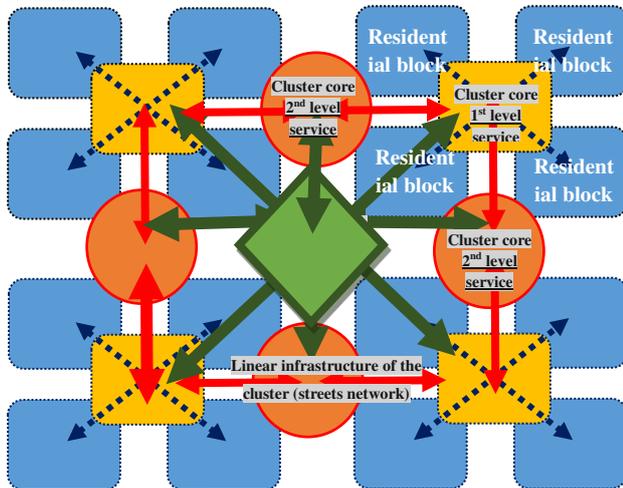
Fig. 1 Existing residential cluster's work system

A unified model of post-Soviet mass housing reuse and harmonious integration of newly formed housing units on the basis of a modernized cluster structure will provide a cost-effective solution to development and re-use issues while maintaining affordable access to urban space and urban identity:

- to develop integrated planning based on the climatic conditions of the construction site;

- to provide a more cost-effective approach to environmental and other operational land use through internal redesigns as a residential development reserve.
- encourage cost savings for infrastructure and maintenance services by upgrading residential cluster infrastructure upgrades and development (reducing communication link distances by restructuring mixed-use remodeling systems with previously bedroom community and multi-level service systems)
- transformation of areas with underutilized functions to more efficient use of areas based on multifunctional areas
- formation of general cluster nuclei, which will be equipped with the necessary complexes to meet basic human needs (residence, work, rest).

Unlike the previous mass housing development requirements, buildings now need modern requirements (satisfying conditions typical of green architecture, seismic upgrades of buildings (due to seismic activity), facade upgrades with energy-saving materials, providing updated architectural features, and high energy efficiency).

Considering the diversity of the whole territory of Armenia from the geographical, climatic and landscape point of view, it is obvious that the formation of any type of cluster of mass (social), with different degree of comfort implies the introduction of a special approach. Analysis of the most prominent examples - Yerevan, Vanadzor, Hrazdan, Kapan cities- shows the following:

- **Yerevan-** considering the development of the city as a complete whole cluster, the center as a core with all components, and the adjacent districts as secondary cluster centers, sub-centers around the consolidated center, it is possible to make a comparative analysis between the formation and prospective development of the old and new residential cluster structures.

- **Vanadzor** - based on the existing settlement, adhering to an irregular planning principle in a certain area. Formed in Soviet times, the districts of Taron, Gugark, Congo and other ones are organized into clusters of 5-9 multi-storey buildings and centralized distribution of service facilities.

- **Kapan-** The historically linear shaped layout of the Kapan city is conditioned by the site's location in the Voghji River floodplain. For many years the villages on the right and left slopes of the Voghji River have joined the town of Kapan, which is now called the various

districts of the city. Due to the relief features of the site, the neighborhoods have unique solutions. The sections of the right bank of the Voghji River (Bagaburj, Sarabert, Verin Vachagan, Nerkin Vachagan, Bech) are located on the top of hillsides and mainly forested landscapes that descend to the floodplain. Only the plateau district is comprised of multi-storey houses, the remaining districts are low-rise houses.

Hrazdan - according to the master plan, the city is 15 km long. The part of the settlement is divided into 3 residential areas: north, central, south. The northern residential area comprises of Jarat, Atarbekyan, Hrazdan and consists of 7 communities. The central residential area comprises Makravan and Aghbyurak and consists of 5 micro-districts. The southern residential district includes the old district center and the Atarbekyan HPS settlement, which consists of 1-2 storey private houses. The residential area consists of 7 micro-districts (fig.2).

Today, the development of a new residential cluster nuclei implies the creation of a systematically structured mix of development zones that will meet the all basic needs of the residents at the same time. In addition, in residential and other types of development, special attention is being paid to the adaptation of the environment for groups of people with disabilities and to make them more accessible. According to the current revised normative requirements the design of the residential area should be prioritized in accordance with the principles of sustainable environment development, following the necessary environmental requirements:

- Investment in mixed-used development
- Import of alternative energy sources;
- Use of ecological materials
- Use of local building materials
- Organizing a safe environment for the less mobile population
- System of accessible and continuous public spaces
- Introduction of alternative vehicles with restructuring of relevant infrastructure
- Creation of a continuous pedestrian communication system (thereby striving to make residential nuclei also a self-sustaining residential cluster structure).
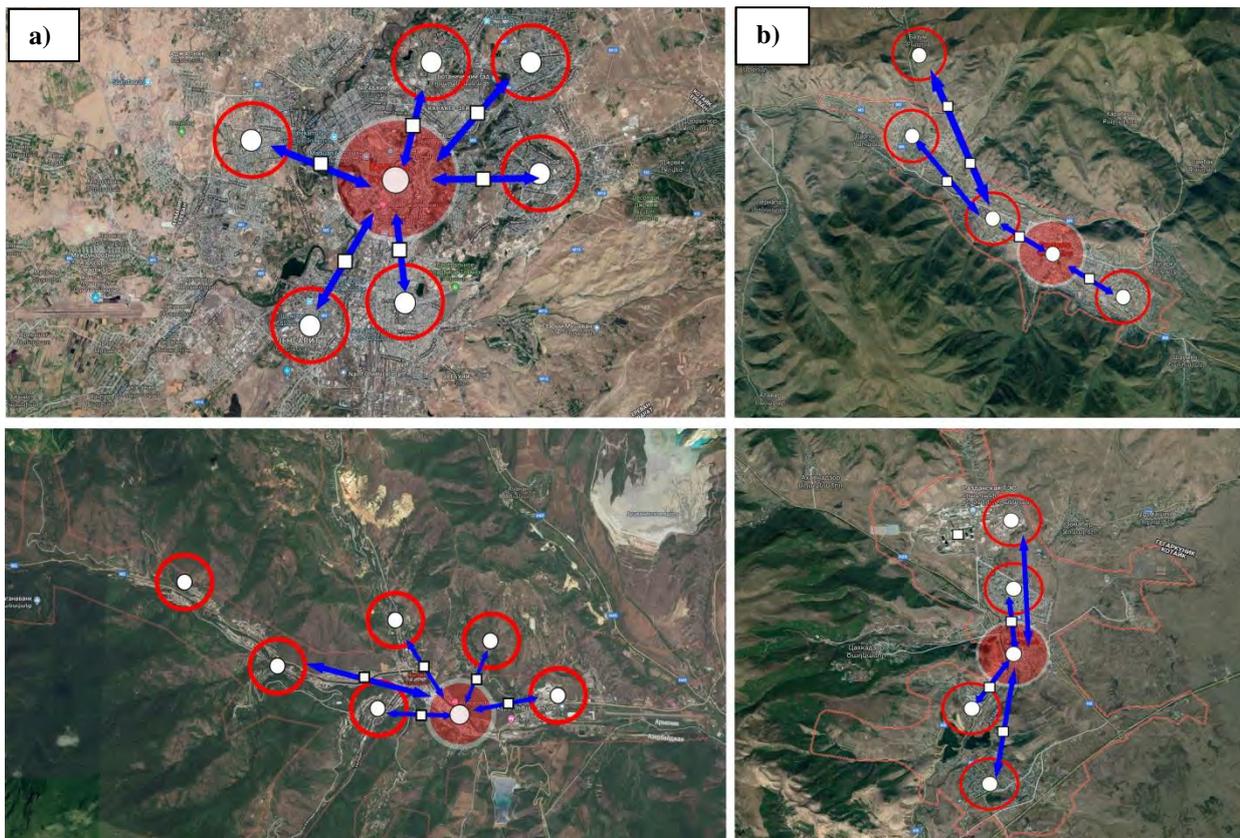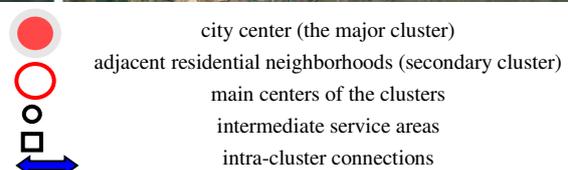

Fig. 2 Analysis of the existed clusters of the RA most prominent examples – **a)** Yerevan, **b)**Vanadzor, **c)** Kapan, **d)** Hrazdan cities (RA)

city center (the major cluster)
adjacent residential neighborhoods (secondary cluster)
main centers of the clusters
intermediate service areas
intra-cluster connections

By examining the research performed at the lower hierarchical level of urban planning within a single cluster (planning unit, micro-district), as an example, looking at the Ajapnyak district of Yerevan and its former cluster structure, one can state the following:

The residential zones and their necessary service facilities are clearly distinguished;

Educational and other public zones, located within the designated access zones;

Public green areas calculated based on regulatory requirements;

Transport planning links integrated into the city's integrated system;

Connection with the surrounding natural landscape (Hrazdan gorge).

However, there are also structural differences in the internal structure of the district, which is a component of the general urban cluster, mainly due to differences in climatic conditions, relief characters, architectural-urban approaches and expected density of residents at the site (fig.3).

3. Conclusion

Based on the results of the research, it is recommended develop the concept of a new sustainable residential cluster. The foundation of a sustainable cluster lies in the continuous fulfillment of basic human functions, namely production, supply, consumption, access.

 The formation of a sustainable cluster nuclear structure implies:

Preserving an exemplary housing fund created in post-Soviet times which are already architectural-urban design fund, in its modernization process, it is suggested to consider the approaches to new sustainable architecture in building design solutions, from facades to sustainable energy-efficient materials, design of alternative energy panels in roofs, green roofs and facades, etc.

Selection of major cluster centers - mainly large operating units - commercial, educational, recreational and leisure or otherwise;

Development of new alternative transport and

Fig.3 Structural differences in the internal residential structure of Ajapnyak district of Yerevan, RA

pedestrian links as intra-cluster connections (based on the fact that some residential areas are restricted in area or not accessible to all groups of people)

Proposing new dimensional solutions by considering combining several functions into one structure (proposing new schematic dimensions of structures, storey, openings, etc.), possibly resuming structures with another function in a case of unjustified or outdated use.

The formation of the sustainable residential mixed use clusters can be applied to different levels of urban development units in different scales: cities, villiages, communities, etc, Modal localization implies sustainable, unobstructed environments and systematic, proportionate perspective development (fig.4).

Acknowledgements
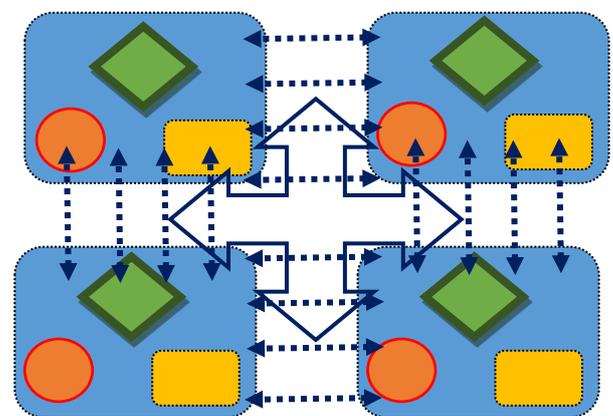
Fig. 4 Proposed option of mixed use residential cluster (each cluster module has its own 3 level of services)

References

Babayan L. "Cluster system as the development model of regions or communities", ISSN 1829-4200 Scientific papers of National university of architecture and construction of Armenia 2018. Vol. I (68), Yerevan. pp. 3-11

Cluster analysis (In English). Available at:
https://en.wikipedia.org/wiki/Cluster_analysis

Residential_cluster_development (In English). Available at:
https://en.wikipedia.org/wiki/Residential_cluster_development

Caucasus Analytical Digest (In English). Available at:
http://www.css.ethz.ch/en/publications/cad.html

Cluster analysis (In English). Available at:
https://en.wikipedia.org/wiki/Cluster_analysis

"Urban planning. civil and rural association planning and construction» norms and rules (RA), 14 October 2014, N 263-Ն (In Armenia) Available   at:
https://www.arlis.am/documentview.aspx?docid=93481

Sustainable_development   _(In   English)   Available   at:
https://en.wikipedia.org/wiki/Sustainable_development

Above the Bunkers: The Architectural Transformations of Tirana

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Abstract

The scholarship engaging with the treatment of communist era architecture in the post-socialist world has extensively dealt with the built environment of Eastern Europe, and only in the recent years has focused on the communist architectural production in the Balkans. However, the gradually expanding trend of the examination of the communist cities of former Yugoslav federation—particularly seen in recent MoMA exhibition—has failed to encompass the architecture of Albania. Nevertheless, the unique character of the Albanian communism, the urban creation of Tirana during the decades of isolation, and the city's recent transformation, allow for an insight into yet another layer of socialist architecture and the contemporary treatment of communist urban heritage. For a city known for its repressive past regime and a nowadays land permeated with concrete bunkers, the contemporary architectural scholarship lacks a deeper insight into the communist city and its post-communist counterpart. In this paper, I examine how the urban fabric of the contemporary Tirana emerged and the role architecture and urban heritage played in the process of the creation of national identities: social, political, and urban.

Keywords

Communist architecture, heritage, urban transformations, urban identity

1 Why Tirana?

In December 1990, as Europe reeled from the fall of the Berlin Wall only a year earlier, in the city center of Tirana, enraged demonstrators toppled the statue of the communist dictator Enver Hoxha. As the early 1990s unraveled, the Albanian capital of Tirana, a city built by Ottomans, and transformed into a stately capital under midcentury influences of Italian fascist planners and decades of Hoxha's isolationist politics, stood on the verge of an urban transformation, one congruent with the construct of a new political, social, and economic identities. In this paper, I examine the construction of the communist and post-communist Tirana. Further, I study the link between the contemporary era-built environment and the five decades of communist urban development; I inquire into the present-day treatment of the heritage of the communist period.

In the examination of the relationship between the communist era urban development and the contemporary architecture of the Albanian capital, I analyze urban changes of a distinctive country in the Balkans. The decades of isolationist politics and state-surveillance produced a city of restrictions and fences: in its contemporary transformations, architects and citizens utilize this heritage to construct open space, one used by all. In this paper, I study the transformations of Tirana in general, and the shifts between the communist and post-communist period in particular. This inquiry is expanded with a short overview of the treatment of communist urban heritage in Tirana's Blloku neighborhood. Ultimately, I inquire into the constructs of urban identity in Tirana and their intersection with contemporary politics.

The creation and negotiation of any nation-state in the Balkans, and throughout the globe for that matter, evolves simultaneously with the construction of its urban identity; in Albania, as elsewhere, this process is exacerbated by hyper-capitalist investments characteristic of the period of political and economic transition. Overall, the Albanian urban transformations bear similarities to the creation of built environments in other post-communist countries in the region, but still, the architectural developments unraveling in Tirana remain distinct due to the country's singular political past.
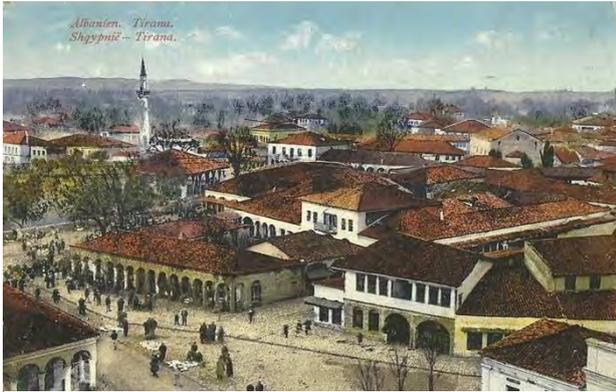
2 The Urban Face of Political History

Fig. 1 Ottoman Tirana. The city center prior to 1914 as depicted on a postcard from the time period. (Source: Wikimedia)

Tirana, the city that only became the Albanian capital in the early interwar years, was founded in 1614, "on a non-fortified site […] a deliberate act to convey the Ottoman feeling of safety and security." (Carter, 1986) A small, provincial town, Tirana of the time period was problematically and symptomatically identified as a city found in a "retarded" Albania in F. W. Carter's 1986 *Cities* profile. In 1920, a growing city of 17,000, Tirana became the capital of Italian-ruled Albania. The Italian architects rebuilt the city under the auspices of the Fascist government, and "for the purposes of self-representation." (Capolino, 2011) By 1943, when the Italian rule in Albania came to its inevitable end, the city had gone through several urban transformations intended to accompany and further facilitate political changes of the time period. In 1945, Tirana awoke under a communist rule and with the Italian-built central city area, one inevitably slated for further alterations befitting of a new leader and a new regime. The Assembly Square, Skanderbeg Square, housing neighborhoods and the remnants from Ottoman period—in particular the Skanderbeg Square Et'hem Bey Mosque—formed a "strongly stratified fabric in which substantial traces of the past persist contributing to its specific identity." As elsewhere in the region, the urban past of Tirana collided with its present, the new capital "superimposed on the pre-existing city." (Capolino, 2011)

In 1945, as the communist era in Albania commenced under the firm leadership of the Party and Enver Hoxha, the urban makeover of the city followed suit. Steadfastly aligned with the Soviet Union, the Albanian bureaucrats embarked on the path of 'modernization,' and transformed the country's built environment in an aesthetic influenced by the Soviet Socialist Realism. The

Soviet enforced style rejected tenets of modernism—deemed as bourgeois and foreign—and fervently advocated for a style characterized by the aim to formulate the "new man in whom ideological wealth, beauty, spiritual and physical perfection coexist harmoniously." The ever-present and all-encompassing regime permeated the Albanian postwar reality. The sparse available literature—mainly from the recent years—outlines the five decades of the communist architecture in Albania as unsurprisingly reflective of state ideology; the cities were transformed without deliberation, their centers "were reconstructed […] historical buildings that did not suit the dictatorship ideology were turned down [sic] […] religious buildings were demolished or turned into profane." (Ndreçka and Nepravishta, 2014)
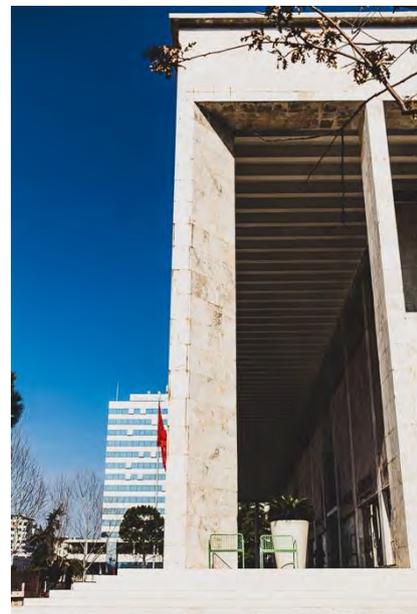
Fig. 2 The National Theatre of Opera and Ballet of Albania (Albanian: Teatri Kombetar i Operas dhe i Baletit). Side façade. November 1953. (Source: Author, 2019)

The overall sentiment that characterized the architecture of communist Tirana was that of austerity, with the exception of few public structures. In the first two postwar decades, the Albanian architects and engineers emulated the architectural Socialist Realism based on Soviet influences; a style treated as a both a "political and ideological approach," as well as an aesthetic expression (Ndreçka and Nepravishta, 2014). Nevertheless, unlike the grand structures that came to define Socialist Realism in the USSR, in Albania this never came to be. The architecture exhibited some traits of the Soviet-influenced style, yet due to the economic

constraints, the elements of Socialist Realism are only found in traces, as is best exhibited in structure of the National Theatre of Opera and Ballet of Albania.

In the aftermath of the 1960s cessation of amicable relations with the Soviet Union and their subsequent withdrawal of financial assistance, the architectural production of Albania continued to be characterized by "uniformity and monotony." Now, the role "that tradition plays in the contemporary architecture, and how architects perceive the values of the past, in order to satisfy contemporary needs" was seemingly fully abandoned (Miço, 2013), its architectural aesthetic defined by a "rigid and standardized typology." (Nepravishta, 2016) However, no urban development is monolithic and linear, and several architectural outliers in Tirana prove this. The building of National Museum of History of Albania, completed in 1981, stands as an ascetic structure, yet its frontal façade mural, entitled "The Albanians," speaks of the historical—albeit contentious—figures from the Albanian past. Still, these only further emphasize the struggles of the era.

3 The Architecture of Post-Communism

As the post-communist reality dawned on Tirana, the remnants of architecture defined by Hoxha's politics had molded the Albanian capital. Ideologically imbued buildings permeated the urban fabric of the newly democratic state's cities; the Western visitors symptomatically stood enthralled by the cityscape peppered with concrete bunkers. The new century brought upon a wave of foreign investments, and with them, Western tourists eager to meet the lands that endured behind the Iron Curtain for the past five decades. The tales of Hoxha's surveillance tools and ubiquitous bunkers contributed to exoticizing narratives that became pervasive in the recent decades; the architecture of the Balkans's cities is now utilized to further the rhetorical and political project of the post-communist 'otherness.'

Today, Tirana is experiencing a construction boom, the new buildings are erected at every corner, the urban expansion and migration unprecedented. The city's post-1990 economic trajectory and the inevitable pains of the transition years are visible on Tirana's facades; the city serves both as a display of change and its catalyst. Now, the Albanian architects are once again in contact with their Western counterparts, and as elsewhere in the region, the local architecture steadily emulates the "Western cultural trends and currents." (Nepravishta, 2016) The architecture of poverty and poor quality has now been replaced by oversized developments, ones that fail to meet the economic reality of Albania. The late 1990s and the early years of the twenty-first century show local urban and architectural transformations consistent with the ideological shifts and the ailments of the transition: corruption, inflation, and migration, to name a few.

Fig. 3 Tirana's city center under construction. (Source: Author, 2019)

In 2013, the Municipality of Tirana approved the city masterplan. Expansive and transformative, it proposed a creation of polycentric Tirana, its planners and architects focusing on the problematic of a densely populated city. Through an array of competitions, the new century brought upon a surge of international firms to Albania, often at the expense of the local architects. Magnanimous and decontextualized, their proposals envisioned large insertions into the capital's cityscape. In their impact on the local real estate and the city's built environment, the international firms have remained negligent of the city's communist urban heritage; a rare example is found in Petreschi Architects' project for the National Bank of Albania, where architects attempted to preserve a "part of cultural heritage," and design the addition to the building "in harmony with the existing one." (Nepravishta, 2016) Tirana's communist heritage is demoted to a secondary position, one to be relegated to the past and ultimately addressed by its users, not the city's leaders. Ironically, the contemporary cityscape of Tirana rests peppered by 'paper architecture,' monumental designs typical for the period of transition, and symptomatically, ones never completed: best examples can be found in MVDRV's "Tirana Rocks," and Coop Himmelb(l)bau's Parliament of the Republic of Albania.

4 Signifiers of Old and New

Throughout the post-communist world, the focus on urban and cultural heritage of pre-communist periods has shown significant upsurge; the nationalist leaders utilize it

for the purposes of creation and fabrication of national identities. Congruent with the trend already established in the countries of the former Eastern Bloc, the heritage of the communist era failed to receive the same treatment. Negotiated at best, and neglected and left to decay at worst, the urban heritage of the twentieth century ideological giant looms large over Eastern and Southeastern Europe, the newly independent countries' leaders uncertain as how to engage with it. Instilled with ideological meaning, the urban fabric of post-communist cities calls for debate, one regularly eschewed.

Fig. 4 Blloku neighborhood of Tirana. Colorfully painted buildings encompass Enver Hoxha's former residence at the center. (Source: Author, 2019)

Today, the communist produced structures are deeply embedded elements of the contemporary urban fabric; they are segments of a negotiated past and a fast-approaching future. Such future is found in Tirana's Blloku neighborhood. Fenced off from Albanians and accessible only to Party members, Blloku housed Hoxha's private residence—a surprisingly modernist building—and residential buildings that served as homes of highly-positioned apparatchiks. Blloku of the twenty-first century is a bustling neighborhood with bars, restaurants, and commercial businesses; it is also a neighborhood of Edi Rama's vibrantly painted communist buildings. The narrative of an arresting, and perhaps debilitating past is counteracted by appropriation of former spaces of oppression, of making the enclosed and ideological urban segment now bustling with life. Tirana's ideological bunkers stand covered in Blloku's colors of interpolated past and present.

5 What now?

When reading tourists' accounts of travels to Albanian capital and countryside—Western tourists, that is—, the tales and images of concrete bunkers found throughout the county abound. The stories of doom, of greyness, and of past terrors of Hoxha's system permeate the (foreign) narratives of Albanian architecture and politics. These fail to critically asses the contemporary problematic of communist heritage, its treatment and unavoidable and perpetual negotiation. To recognize the communist heritage as an identifier of oppression is accurate, but only to an extent, as "[H]istorical buildings […] are receptacles of fragments of personal and social memories […] whose pigeonholing into an all-encompassing category of traumatic memory is problematic." The memory of the traumatic ideological past is unavoidable, yet "memory, and hence the cultural heritage of dictatorship, needs to offer a well-rounded account of the way the past acts upon the present […] but not negating the politically laden nature of heritage." (Iacono and Këlliçi, 2016)

The uncritical narratives of the horrors of the past renders the Albanian political and architectural present and its users, the Albanians, devoid of agency and further perpetrates the 'otherness' of the Balkans. The region's urban landscape and its peoples are simultaneously reduced to the hostages of the past and of Western and Westernizing gaze. Nowadays, the bunkers are only to be found by wandering tourists in rural Albania. In Tirana, their ideological value has been negotiated and transformed. For better or for worse.

References

Capolino, P. (2011) "Tirana: A Capital City Transformed by the Italians," Planning Perspectives, Volume 26, Number 4. pp. 591–615. https://doi.org/10.1080/02665433.2011.601610

Carter, F. W. (1986) "Tirana," Cities. pp. 270–81. https://doi.org/10.1016/0264-2751(86)90068-5

Iacono, F., Këlliçi, K. (2016) "Exploring the Public Perception of Communist Heritage in Post-Communist Albania," EX NOVO Journal of Archaeology, Volume 1, Number 1 (2016): 55–69. [online] Available at http://archaeologiaexnovo.org/2016/wp-content/uploads/2016/12/4.-Exploring-public-perception.pdf [Accessed July 2019]

Miço, D. (2013) "When 'Words Fall on Deaf Ears'. An Outline of Albania's Socialist Architecture," sITA – Studies in History and Theory of Architecture, Number 1. pp. 45–59. [online] Available at https://www.ceeol.com/search/article-detail?id=126398 [Accessed June 2019]

Ndreçka, O., Nepravishta, F. (2014) "The Impact of Socialist Realism in the Albanian Architecture in 1945-1990," Architecture and Urban Planning, Volume 9. pp. 27-32. http://doi.org/10.7250/aup.2014.004

Nepravishta, F. (2016) "Contemporary Architecture in Tirana during the Transition Period," South East European Journal of Architecture and Design. pp. 1–11. https://doi.org/10.3889/seejad.2016.10019

Werkpalast CoHousing: Case Study of Collective Reuse of a Prefabricated School Building

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Abstract

There are many examples of community-based housing bottom-up developments from European cities, where valuable buildings have been saved. It is important to be aware that these collective developments can also assist in the continuous use and renovation of the post-socialist cities. This research paper shows the importance of recognizing the methods and effects of those community-based housing developments that integrate the current built environment. Community-based bottom-up housing developments (collective reuse) in mass housing neighborhood is really special, there are more Berlin projects in the planning phase, and some realized. Werkpalast Lichtenberg housing project (2010) in Berlin's Lichtenberg district is a revitalization of a nursery school (1976) and garden. This project is a good example of reactivation and individualization of prefabricated building structures using new functions and existing resources. Through the analysis, it becomes clear that bottom-up initiatives have a positive impact on the inhabitants of the building, the neighborhood and through this on the whole city in a small and a large scale as well.

Keywords

Cohousing, collective reuse, community-based, reactivation of prefabricated buildings

1 Adaptive reuse and post-socialist urban heritage

In recent years post-socialist European cities are often unhealthy living habitats, both in a physical and mental way. During urban development our attitude towards the buildings actual condition is an important question.

Recycling old buildings have several advantages, old buildings physically and socially link us to our past and become a part of our cultural heritage. Adaptive reuse is defined as the process that adapts buildings for new functions while retaining their features. (Bunnel and Zaitzevsky). In the last three decades adaptive reuse in mass housing neighborhood became very important. This study shows Cohousing developments in mass housing neighborhoods and collects the advantages and possibilities of this reusing method.

2 Cohousing developments

We know many examples of Cohousing developments from European cities where valuable buildings or blocks have been saved while the livable environment has been created. (La Found and Tsvetkova)

The different English terms for Cohousing (Collective Housing, Co-Housing, Common Housing, Co-Habitat and Cooperative housing) mean almost the same. The definition of Cohousing is the following: "Cooperative Housing is an association of people (co-operators), which cooperatively owns and manages apartments and common areas. Individual members own shares in the cooperative and pay rent which entitles them to occupy an apartment as if they were owners and to have equal access to the common areas." (id22 – Institute for Creative Sustainability)

Creating and operating cohousing buildings usually places emphasis on sustainability, compared with other types of housing. Four aspects of sustainability stand by cohousing developments: (Marckmann et al)

- more sustainable technologies built into houses;
- smaller and more compact houses;
- pro-environmental behaviour of residents;
- environmental advantages for one- and two-person households.

These aspects could not be parallelized with the four pillars of the sustainable development (Culture, Society, Environment and Economy). Therefore this paper analyzes the case study (Werkpalast CoHousing) in the aspects of sharing economy, social goods and environment.

3. Collective reuse

3.1 Collective reuse of educational buildings

Collective reuse is a process that adapts buildings for collective living function while retaining their valuable features. These projects are community-based and bottom-up housing developments. The European case studies show, that collective reuse is a mixed solution for preserving the valuable built heritage, reducing urban sprawl and developing neighborhood interaction. (Babos)

Among the European examples are abandoned residential (Wilma, Berlin), educational (Grote Pyr, Hague), and industrial (Sargfabrik, Vienna) buildings converted into cohousing. Furthermore we can find the rehabilitation of a whole downtown block previously sentenced to demolition (Dreieck, Zürich). The Grote Pyr (Fig.1), monumental school building is used as service, work and living space. It was occupied by inhabitants and artists from the neighborhood, trying to offer something to the community in the Zeeheldenkwartier district in Hague.

Fig. 1 Grote Pyr Co-Housing from outside, Hague
- photo by Theisler, K

This example shows, that converting educational buildings into cohousing is one of the most interesting, in the aspect of urban development. Furthermore, the public spaces around an educational building are suitable to develop the neighborhood interaction (Franqueira).

3.2 Collective reuse of educational buildings within a mass housing neighborhood

The aim of the study is to understand the advantages and possibilities of collective reuse in post-socialist areas. The existing examples show that these types of developments can also assist in the continuous use and renovation of the post-WWII buildings and public spaces of post-socialist cities. Based on the introductory part, the following analysis presents the collective reuse of an educational building within a mass housing neighborhood.

Collective reuse in the mass housing neighborhood is really special. To the best of our knowledge, there are no examples in the CEE countries. But we can find more projects in Berlin, some are realized and more in the planning phase. The explanation for this phenomenon may be, that the post-socialist heritage was handled with the open-minded values of western culture.

Fig. 2 Aerial view of the block of Werkpalast Cohousing – source: Google, 2019

In the post-socialist Lichtenberg district is more collective reuse projects in a mass housing neighborhood. Wilma is a community garden surrounded by prefabricated building (from the 1970s), that have been collective reused for cohousing (in 2012). The case study, Werkpalast Cohousing (Fig.2) is a revitalization of a prefabricated educational building and its surrounding garden. (Bundesministerium für F, S, F, J)

4 Case study of Werkpalast Cohousing, Berlin

4.1 General information

The main goals of this development were: living in a co-op, ecological building to a very low energy-use standard and the urban interaction. The Werkpalast CoHousing project is located at the south side of Berlin's Lichtenberg district at the edge of a post-socialist residential area. The block consists of two mass housing blocks and two historic style buildings, surrounding a 6000 m2 garden. (Fig.3)

Fig. 3 Aerial view of Werkpalast CoHousing and the community garden – source: Google, 2019

The complex was built in 1976 and had been abandoned since 2001. In 2006 a small group from the local community decided to stop the decay of the old nursery school to turn it into a modern community home. Plans of the refurbishment were created with the future tenants as a participative design method. A total of 18 flats, ranging from 30 to 190 square meters, and 3 common areas were ready to move in by March 2010. (Fig.4) Amongs the common spaces, the 70 square meter workshop area and the huge garden with plenty of green places are open to the public. (Simons)

Fig. 4 Street view of the former nursery school, Lichtenberg in Berlin – source: Google Street View, 2006

4.2 Collective reuse of neighborhood in Werkpalast

This project is a special reactivation and individualization of mass housing neighborhood, using new functions and existing resources. The habitants from the neighborhood and the whole district can use different open places belonging to the property. There are regular events in the garden and the club announced on the internet and are open to the public. The Werkpalast community organizes different kinds of cultural events: musical, educational, artistic, etc. The biggest happening in the neighborhood is the Summer festival in Werkpalast (Fig.5.)

Fig. 5 Poster of 2018's Summer festival in Werkpalast – source: https://sites.google.com/site/selbstbauwebsite/

Besides the use of different type of places, Table 1 summarizes the benefits of this project in the view of sustainability in different urban scales.

Werkpalast Cohousing is a new type of neighborhood-oriented development. The recycling of former GDR (East Germany) prefabricated construction was one of the central theme of the design. Additional to these, goals were: creating a very low energy use building and healthy green spaces.

Facing Post-Socialist Urban Heritage

Affordability and diverse living typologies specifically complement the lacking in the neighborhood. This helps to diversify the conventional mono-structure of inhabitants and uses. Werpalast CoHousing makes a mix of living, working and recreational spaces in the area.

The participatory design process generates the inhabitants to act proactively with the developments of the area. Diverse community-shared spaces are offered, green and open spaces are improved, connections and interactions are fostered. (Ediner, Ring)

	sharing environment	sharing economy	sharing social goods
Building	eco-design	affordability	participatory design
Neighborhood	reuse	living typology mix	shared places
District	open green places	mixed-use	sharing events

Table 1: The used methods in Werkpalast CoHousing in the view of sustainability in different urban scales– source: own editing

4 General benefits of collective reuse

Our study suggests that collective reuse have more positive impact than adaptive reuse on the building, the neighborhood and through this on the whole district. So these developments helps the interaction in a small and a large scale as well.

As a summary, Table 2 compare the advantages of adaptive and collective reuse in different urban scales. Besides revitalization of prefabricated buildings, collective reuse reactivate mass housing neighborhood and also encourage citizens to act so. These communities organize communal programs, and they teach others to participate in operating and developing their cities.

	adaptive reuse of mass housing	also collective reuse of mass housing
Building	Renovation and maintenance Useful rehabilitation	Building is looked by inhabitants constantly Creative usage of spaces and structure
Neighborhood	Increases property prices Sustains current standards	Involve surroundings into activities Improves social life around
District	More residents in the districts Expand social network Have valuable building and open spaces	Positive example for society Improves other reuse developments Urban interactions

Table 2: The advantages of adaptive and collective reuse of mass housing in different urban scales – source: Babos, A. - own editing

5 Opportunities for further research

Further analysis could cover the examination of the environment that gave place to this development, including the behavior of local councils towards the communities' plans either in a supporting or an interfering way. Furthermore, it is essential to expound the operating model of these cooperative housing projects established after the reconstructions, namely what the method is to live sustainably in the long run in these homes constructed in the community.

Learning the features of well-functioning projects could help us to acquire existing practices -integrating built mass housing heritage into collective developments- and establish the cohousing model in Central and Eastern Europe.

References

Babos, A., Collective reuse – CoHousing developments in the service of preservation the built heritage, in: Tamás Molnár. Places and Technologies 2019: The 6. th International Academic Conference on Places and Technologies, 2019, pp. 117-123.

Bundesministerium für Familie, Senioren, Frauen und Jugend: Wohnen für (Mehr)Generationen Gemeinschaft stärken – Quartier beleben, 2012, pp. 8-10.

Bunnell, G., Zaitzevsky, C., Built to Last: A Handbook on Recycling Old Buildings". Bulletin of the Association for Preservation Technology. 1979.

Eidner, F., Ring, K., Berlin: Self-Initiated Urban Living and Architectural Interventions, JOVIS, 2013, pp 20-84.

Franqueira, T., Service design and urban communities, online paper, 2017. pp 4-8.

Marckmann, B., Gram-Hanssen, K., and Christiensen, T.H:Sustainable Living and Co-Housing: Evidence from a Case Study of Eco-Villages. Built Environment, vol 38, 2013pp. 114-116

id 22: Institute for Creative Sustainability: experimentcity: CoHousing Cultures - Handbook for self-organized, community-oriented and sustainable housing, JOVIS, 2012, pp. 6-17

LaFond, M., Tsvetkova, L., (id 22: Institute for Creative Sustainability) :CoHousing Inclusive, Jovis, 2017 pp. 23-80.

Ring, K., Urban Living - Strategies for the Future, JOVIS, 2015, pp. 100-183

Simons, K., Gebäude im Wandel - Die Platte wird Palast, in: Berliner Mieterverein, Online Magazine, 2009

Case Study of Applied Research: Defining the Scale of Planning Unit in Post-War Large Housing Estates

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Abstract

Housing estates cover considerable patch of many of European cities, with the consequence today massive property demand encourages a significant shift in the mass housing stock. The regeneration of the deteriorating areas is an essential task of contemporary urban planning and design practice. The inherent isolation has to be dissolved, the insecure border zones have to be reorganized in favor of a sustainable liveable future. In the last 15-20 years many different regeneration processes were experimented and now the primary question is how we can evaluate the success of the changed built environment in helping upcoming projects?

This case study is part of applied research that is concentrated on the scale of the recent years' interventions in the areas and looking for urban planning and design issues which weaken the success of the projects. The analysis of Voorhof area, in Delft, Netherlands compared to Újpalota area in Budapest, Hungary will strengthen the past idea of planning unit and approach it in the today's renewal concepts.

Keywords

large housing estates, mass housing, sustainable liveability, methodology, exploratory research

1 Introduction

After 20-30 years of rehabilitation of mass housing areas, different European cities could present evidence for a variety of applied development research. As in the building years, there are around 10 years of slippage between West and Central-Eastern Europe in the renewal process but under the umbrella of the European Union, post-socialist countries enhance possibilities to learn and draw conclusions from others. This case study is part of an applied research project focused on recent years' interventions and seeks to identify urban planning and design issues which weaken the success of the projects. A comparative analysis of the Voorhof area, in Delft, Netherlands, and Újpalota in Budapest, Hungary will examine the past concept of planning units in the light of today's renewal concepts.

2 Project selection

The selected areas are typical large-scale housing estates, but their socio-cultural background is different. The differences are obvious, but the scope of the research allow us to closely compare them in the field of urban planning and design. The Voorhof project was realised in

the welfare state of the Netherlands in 1957. Újpalota is one of the largest developments of the post-socialist capital, Budapest, in Hungary. In expanding Delft, an ambitious plan by the architect, S.J. van Embden provided more than 21000 new apartments. In the first period in Voorhof 7000 dwelling were built, the Voorhof II project

Figure 1. Development plan of Voorhof area, 1957.
Figure 2 Development plan of Voorhof housing estate (Source: Delft City Archive)

in Buitenhof 7200, in Tanthof 6900 new homes were constructed. (Verhalenwiki,2015) Thanks to the renovations and continued population growth today, the

housing stock in this area is still growing. Forty percent of the inhabitants in Delft, 41500 people, are living in this postwar part of the city. Following the relocation of fixed-track public transport underground, the areas connection to the historical part of the town will become more attractive and continuous with the new urban fabric.
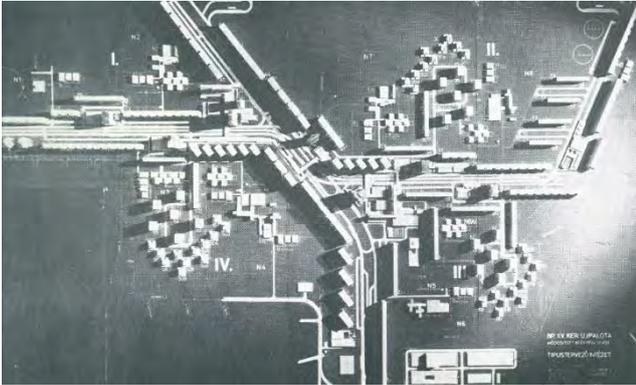

Figure 3. Model about the development plan of Páskomliget housing estate (Source: Lechner Tudásközpont)

The urban situation of Újpalota is more complicated. The area is 10 km from the center of the capital without any fast-public transport connection that might counterbalance its isolated position. The area can be subdivided into four different parts: the Paskomliget housing estate, the housing estate along Frankovics Mihály Street, the industrial area along Késmárk Street and a suburb, a mainly greenfield area. (Körner-Nagy, 2006) Today a total of 36259 inhabitants live here in 15400 homes. The urban character of the two case-study areas has many similarities that makes a meaningful comparison possible. This is even more so if we narrow the focus of study to

HE	Population	Apartments	Area (km^2)
Voorhof	12500	7000	1,29
Buitenhof	14000	7200	1,88
Tanthof	15000	6900	2,26
SUMM **Voorhof**	**41500**	**21100**	**5,43**
Páskomliget			1,32
Frankobics M.			0,22
Késmárk In.	36200	15400	1,33
Suburb (green)			0,73
SUMM	**36200**	**15400**	**3,6**

Table 1. Data on Voorhof and Újpalota areas (Source: Központi Statisztikai Hivatal / HU / 2011, Central Bureau of Statistics / NL / 2008)

two areas, the Voorhof "wijk" and Páskomliget "lakótelep", both postwar housing estates. (table 1.)

3 Methodology

The mapping of an urban structure can characterize the system of the target area, highlight spatial interactions and point out blind spots. The map is a category of data that can make the invisible (or the obvious) visible. (Carolin Genz and Diana Lucas-Drogan, 2017) To understand a piece of urban fabric we need to collect diversified knowledge, a task which in urban spatial studies can be based on maps. During our examination three branches of data - connecting to maps - were used: first, on-site monitoring, photo documentation; second, analysis of the historical data supported with archive research; and third, the most recent urban planning and design documents of the housing estates were reviewed by the author.

4 Research issue

Postwar housing estates were created through conscious design decisions and feature a systematic structural layout. This study attempts to prove that the legibility of this system can greatly contribute to the success of the renewal projects. In this way research questions can be clearly outlined: What kind of units can be subdivided on a housing estate? What is the optimum planning unit in a housing estate rehabilitation? What is the relation between the legible and legal divisions of the housing estate?

5 Comparison

The target areas will be analyzed on two urban scales. The first scale is the spatial extent of the housing estate. Then, the official or possible neighborhood units will be defined. Finally, the action areas in the selected rehabilitation in each of the two projects will be the focus the attention: namely, the area of Poptahof-Zuid in Voorhof and the Zsókavár action area in Újpalota.

5.1 The housing estate as a planning unit

In the Hungarian literature, many housing estate definitions are presented. Common in all of them is the designation of the estate as a "unit". This is quite understandable, deriving from the chronology and shape of the built environment. The problem comes when we set out to define the unit in strictly legal terms as is essential in a rehabilitation project. Where can we set the borders of the "action" area? Does the housing estate exist as a unit?

Today Voorhof housing estate is an official district of Delft. As a result, master plan of the Voorhof applies to this exact division. Comparably, Újpalota is a part of the XV. district, and furthermore, it can be divided into four different spatial and functional parts. The housing estate which is emphasized in this study, referred as "Páskomliget" in planning literature but this name has no legal force despite the fact that Páskomliget covers 1,3 km^2, as does Voorhof. It is apparent that the confusion stemming from undefined borders will potentially have a negative impact on the development of an area, both in spatial planning or socia-cultural issues.

5.2 The neighborhood as a planning unit

Both housing estates are organized around two urban cross streets which seemingly divide them into four main parts. We could translate this gesture with emphasizing them as four neighborhoods, but this is questionable. However, in the regulation plan of the district of Újpalota the area is legally divided into two planning units following the cross lines. (figure 4.) As one of the designers of Páskomliget argued:

"It would be desirable if along the main streets on the both sides elements of urban mood-enhanced could be place of: colorful shop windows, restaurants, terraces ..." (Árpád Mester)
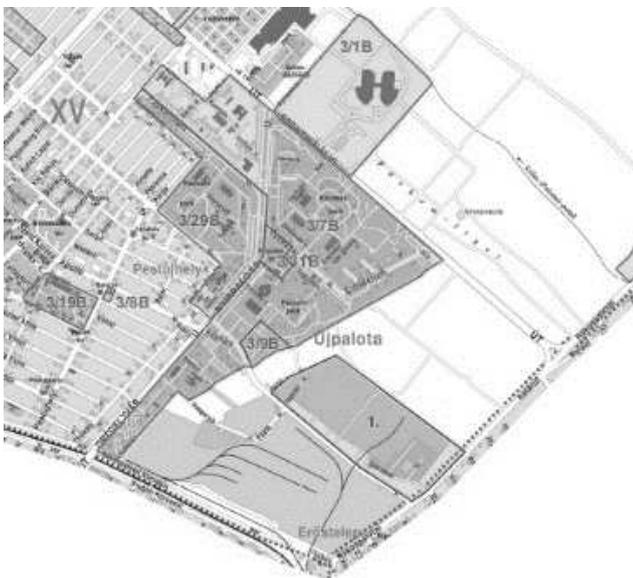

Figure 4. Segment of the regulation plan of XV. district (Source: Municipality of XV. District, Office of the Chief Architect)

In other words, the lines of blocks of flats could emphasize metropolitan values while behind them, smaller family-like neighborhoods could be realized. Today this duality of Páskomliget is hardly perceptible by the inhabitants because this proposition - which would result in around 8 rather than 4 units - is impossible owing to the wider position of the estate in the urban fabric of

the capital. But the comparison with the system of Voorhof is not over yet. In the original master plans of Voorhof we can well appreciate the concept of the units (figure 5.), but recent documents are more forward-thinking. In 2008 announcement by the Central Statistical Office of Netherlands, most sectors of Dutch cities, including Voorhof, are divided into smaller units called "buurt". This expression is more familiar in the case of the neighborhood unit, but the official definition is clearly visible in the case of Voorhof.

"The neighborhood (buurt) is the lowest regional level and is delimited from a development point of view or socio-economic structure." (Wiegers, Devillé, 2008)

In this way Voorhof has 8 separated subdivisions – in fact interesting in the comparison in two ways. (figure 6.) In this division the planners were not afraid to create linear
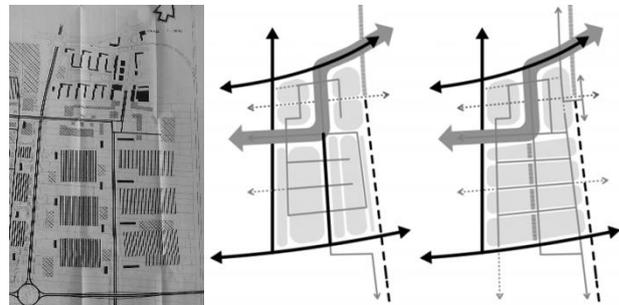
Figure 5. Origin development plan of Voorhof housing estate (Source: Delft City Archive)
Figure 6. Development plan of Voorhof, 2018 (Source: LUZ

neighborhoods related to the usage and shape of the build environment, neighborhoods that can be a good example for Páskomliget. In addition, in the proposal of LUZ architecten in 2018, the system of the units is under transition if the wider context and movements in the housing estates are analyzed. (LUZ,2018) The second observation moves us forward to the next topic. This type of the division, as fixed in the definition, is delimited from the development point of view.

5.2 The action area as planning unit

In 2004 the Palmboot landscape architecture office created a development plan and realized a project for the Poptahof area of the Voorhof, where they narrowed the focus of attention to one neighborhood unit as originally built in 1960. (figure 7.) Shortly thereafter, in 2005 a participatory urban garden has become fully operational in the north part and in 2008, within the framework of a Sesac European Project more action areas were created in the south part of the neighborhood. Meanwhile the global economic crisis blocked the regeneration process. Therefore, from today's perspectives the future of the area is questionable. In Poptahof-Nord today one more public
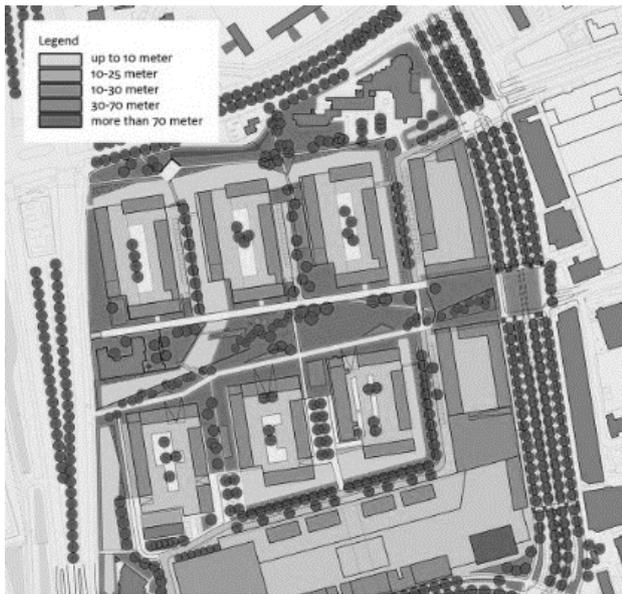
Figure 7. Development plan for the Poptahof, 2004 (Source: Palmbout Urban Landscapes bv)

garden becomes operational otherwise the condition of the built environment is strictly constant. So, what will be the future path for the area? Will it follow the CBS borders, with Zuid and Noord planned on separate lines, or will the area be merged again?

In Újpalota, in the Páskomliget housing estate the Zsókavár action area was created within the framework of KMOP, also an EU funded project, in 2010. This area has no hierarchic connection to the system as in the case of Poptahof, but the area is limited to the north section by cross roads. (Benkő, Balla and Hory, 2018) The Zsókavár unit is essentially cluster of patches. The different patches were built in four stages. The patch built in the first period is connected to a bottom-up project focused on public spaces. (Tóth, 2016) In the second and third period the process became top-down, and the attention shifted to the
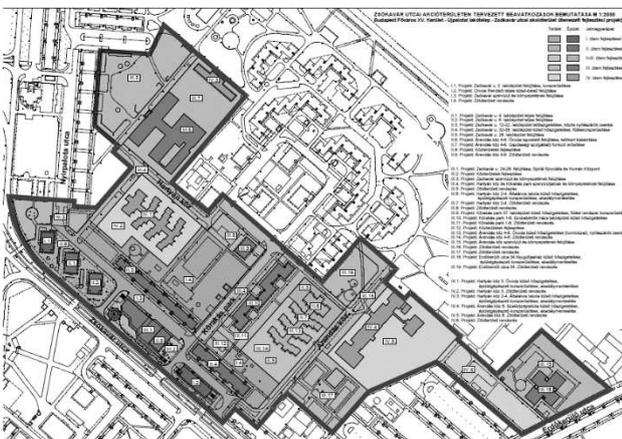
Figure 8. Zsókavár action plan of XV. district, 2015 (Source: Municipality of XV. District, Office of the Chief Architect)

residential building condition. Finally, the fourth support covered mainly public facilities. (figure 8.) The action area delineates a unit, but this is different from the earlier ones discussed. The project was clear in its outline, but the question is what this division might mean in the future development of Újpalota? Is it a start in creating a viable neighborhood?

6 Conclusion

Comparing the two situations, their problems converge with each other. The subdivision of a housing estate is a particular issue that can define the future of postwar residential areas. The issue creates a remarkable responsibility for the urban planners and designers. We should seek to avoid a top-down, database dictated approach of the defining of the division. Today's investment and subsidy possibilities are usually area focused. A renewal project will be seen as a success if the planning unit in the legal division, and the action area, correspond meaningfully to each other. In the Dutch context, more sufficient attention is given on this issue. The continuously prepared and previewed development plan create an effective circulation between the planners and decision makers, that can make the projects successful even if the results are not perfect. Studying the Hungarian example, there is a lack of specified resolution of this issue, but projects like Zsókavár are encouraging the participants towards action in this subject too.

References

Benkő, M., Balla, R., Hory, G. (2018) " Participatory Placemaking in the Renewal of Post-Communist Large Prefabricated Housing Estates: Újpalota Case Study", Journal of Place Management and Development, Volume 11(3), pp. 223-241. doi: http://dx.doi.org/10.1108/JPMD-06-2017-0050

Genz, C., Lucas-Drogan, D., (2017) "Decoding mapping as practice: an interdisciplinary approach in architecture and urban anthropology", The Uban Transcripts Journal, Volume 1 nr. 4,

Körner, Zs. and Nagy, M. (2006) "Az európai és a magyar telepszerű lakásépítés története 1945-től napjainkig" ("The history of European and Hungarian development of housing estates from 1945 to the present"), 1st ed., Terc Kiadó, Budapest, Hungary

LUZ Architecten, (2018) "Voorhof Achtergronddocument" ("Background documents"), Delft, Netherlands

Tóth, V. (2016), "Parkot tervezünk közösen! Esettanulmány egy újpalotai park közösségi tervezésének folyamatáról", ("We are planning a park together! Case study of a participatory planning process in Újpalota") Parola, Vol. 25 No. 1, pp. 2-13.

Wiegers ,T.A., Devillé, W. (2008) "Herijking stedelijke achterstandsgebieden", ("Re-evaluation of disadvantaged urban areas"), 1st ed., Nivel, Utrecht, Netherlands

Common Areas in Multi-family Housing in Serbia: Case Study of Cerak Vinogradi, Belgrade

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Abstract

Multi-family housing as opposed to individual housing is recognized as a model for solving multiple problems as an intensification of social changes and changes in the demographic picture of the population and increase in the number of inhabitants in cities. Need to change and adapt is one of the key determinants of modern life in the city. However, the special focus of this paper is on common areas as collective spaces of multi-family housing. The research examines the use of common areas by guidelines/propositions for overall housing design given by Milenković: the examination of hierarchy, the relationship between the individual and the collective sphere, the need for the built space to provide an active relationship of planned and spontaneous. The paper researches case study of Cerak Vinogradi housing complex as one of the recently protected sites and only protected site in its entirety form the second part of the 20th century. The paper shows that the proper common areas can led to multifunctional spaces for activities and it can be a more sustainable and livable space.

Keywords

Multi-family housing, 20th century, common area, common area, Belgrade, Cerak Vinogradi.

1 Introduction

The direct need for new mass housing starting with the 1960s and after was not only characterized by the need to answer to housing shortages caused by war or overpopulation and poor conditions in cities, but shifted from universal solutions to a more user-oriented way of designing. Socialist housing in Yugoslavia had in mind that the design concepts should allow the change in residential space considering future resident's needs and changes of family members. Mostly typology of multi-family housing was focused on providing more adaptable solutions to residents and trying to perceive new ways in using common areas.

Because of that the second half of the 20th century can be considered the period of significant change of multi-family housing. Spatial concepts are not only seen as a response to social demands and went beyond what was necessary to become the base of a new kind of life. This paper focuses on common areas as spaces for neighborhood gathering for different events.

2 Development of multi-family housing

The development of multi-family housing follows modernist themes and principles, however the housing in post-socialist countries experimented with uses and well-being of spaces including common areas.

Multi-family housing in Serbia in the period of the 1960s was followed by a number of architectural competitions. The competitions tended not only to address the shortage of housing stock but also to improve the housing for users, with the ability to adapt to different habits and functions (Marušić, 1975).

These spaces provided not only necessary services but were also meeting places for the residents. This paper focuses on common areas of the Cerak Vinogradi housing estate as one of the significant residential complexes in Belgrade from the 1980ies. Dynamic and unplanned changes of many residential complexes from the second half of the 20th century in Belgrade included changes in common areas. Cerak Vinogradi, on the other hand, has been a unique example of "clean" and quite "intact" space because of the struggle of its architects and residents to preserve the values of the initial project.

2.1 Common areas and different uses

Common areas in this paper are considered as semi-public areas in multi-family housing. Rabinowitz defines them as secondary segments in residential complexes and names them residual residential spaces that are owned and managed collectively by the community of owners (Rabinowitz, 2012). These spaces include the common property and this paper focuses on built common spaces in the residential complexes that can be a part of a specific residential building or separate structures – focusing on neighborhood and community levels.

One significant point of common areas is that they are used together and owned together, the second point is that these spaces can and should accommodate various temporary activities.

3 Methodology

Common spaces are neglected compared to the individual dwellings. However, authors such as Milenković point out significant propositions/guidelines in the domain of housing that can be seen as a tool to address the issue of semi-public spaces in multi-family housing. Three points can be highlighted considering the semi-public spaces in multi-family housing:

- the examination of hierarchy,
- the relationship between the individual and the collective sphere,
- the need for the built space to provide an active relationship of planned and spontaneous.

Milenković states in his guidelines that at all this the technical and technological problems, which were in that time often pointed out, should be understood only as a means to an end (Milenković, 1979). Considering that specific guidelines, the paper examines the study of Cerak Vinogradi residential complex. The paper intends to show how this project defined the quality of common areas with these three points and until today stayed a livable housing estate.

4 Case study of Cerak Vinogradi

Belgrade development was significant in the second half of the 20th century, especially during the (1) period 1960s and the (2) period in the 1970s and 1980s. Cerak Vinogradi is a multi-family housing complex where besides creating customizable private apartment spaces, architects focused on the issues of community, common areas and their role in the well-being of the whole neighborhood. Cerak Vinogradi originally consists of two

parts: Cerak 1 and Cerak 2 (overall 67 buildings and 3650 dwellings).

It was designed starting 1977 and with the construction finished by 1987. The complex was designed by the architects Darko and Milenija Marušić and Nedeljko Borovnica. The project was done in the Institute of Architecture and Urban&Spatial Planning of Serbia (Docomomo Serbia, 2003). It is the first and for now only housing complex from the second half of the 20th century that is protected as a cultural property - Spatial cultural and historical entity, in the Republic of Serbia and one of two project permanently exhibited in Museum of Modern Art in New York (Belgrade City Institute for the Protection of Cultural Monuments, 2019, RTS, 2019).

The paper will focus on the first project - Cerak 1 and its contemporary state. Common areas were one of the main differences to other previous multi-family housing projects in Belgrade. Architects wanted to get back to the neighborhood values and to emphasize the ambient, not to force the feeling of living in a big housing block.

Through the guidelines presented by Milenković, the concept of Cerak Vinogradi serves as a study that uses these elements in the design of the common areas.

4.1 The examination of hierarchy

Usually, housing blocks consisted of two levels of community centers and areas: small areas inside of the each building (for assemblies of tenants) and the local community centers. However, the idea in Cerak 1 that led to common areas hierarchy was that the exterior spaces were represented through the method of multiple sociological-spatial levels (Marušić, 1979, Marušić i Marušić, 1987):

- level of residential pedestrian *streets* - a series of buildings of 4 and 7 levels (including ground floor)
- neighborhood level is the second level –with the North, East and South neighborhoods
- community settlement is the third level consisted of the three neighborhoods

Fallowing that the common areas were developed in three layers motivated to find the subset of the community level focusing on the neighborhood (Fig. 1) (Marušić, 1979, Marušić i Marušić, 1987):

- street councils were the first level of common areas
- neighborhood centers were the second level
- local community center was the third level

The street councils were a substitute for tenant assemblies that were in every building and usually occupied $0,5m^2$ for every dwelling. Street councils thereby had bigger areas. The neighborhood level as a medium level consisted of three centers in Cerak 1 (up to $450m^2$). The neighborhood center had cultural, social and other use (Marušić i Marušić, 1987). The local community center was designed as an individual space in the complex and the intention was to be a central spot, however that space was never built. Neighborhood centers stayed as the highest ranking common space and prevailed with their activities until today.
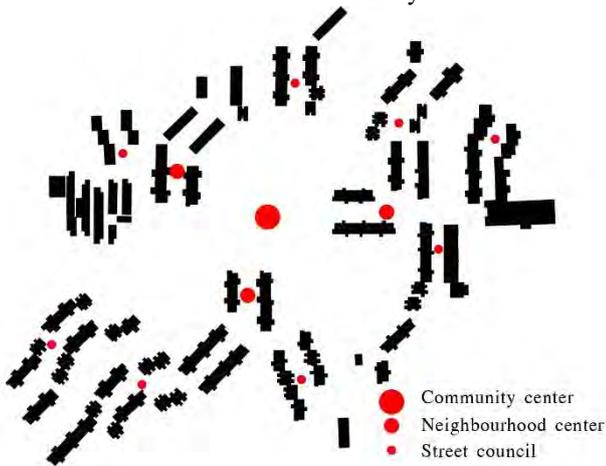

Fig. 1 Cerak Vinogradi's (Cerak 1) map of common areas (Source: Author)

4.2 The relationship between the more individual and the more collective sphere

The architects point out that the household council spaces are most common on the ground floors of each building. These spaces are usually reduced and with the fact that these small volumes make it impossible for different functions to be accompanied beyond the ones on the level of a single residential building (Marušić, 1979). The main idea is to move the home council space from the premises and to create a common space within the neighborhood centers, also besides architects kept some in-between common spaces as street councils (not in every building).

As the hierarchy separated three levels of gathering in the residential complex, also that three levels had different intensity and use for the residents. Local community center is the most public area of them with more official space concerning the community assembly. The neighborhood center has the most diverse use and combines cultural, social and trading spaces/stores. Street councils are pure technical ones, considering that the

architects intended them for more gatherings that were intended for maintenance sessions. Smallest spaces don't have much to offer and were not intended to facilitate activities except regular meetings. On the other hand, the local community center has activities that exceed the neighborhoods in Cerak 1. Neighborhood centers have the ideal semi-public quality and its variety of uses. When we take into consideration that the local community center was never built, we have two common areas that one is more technically based and other spaciously generous to different uses.

This bigger common area provides opportunities for different and more flexible arrangements (event halls, youth clubs, and shops) (Fig. 2, 3) concerning individual home council spaces, which, by their dimensions and location, are limited to the range of activities and the number of users.

Fig. 2 Cerak Vinogradi's common area (Source: Author)

4.3 The need for the built space to provide an active relationship of planned and spontaneous

Change can be perceived as a momentarily change by the users or possibility to change and have temporary uses in later time due to new needs and interests of its residents.

This planned-spontaneous part is the most variable one. As the architects write about the use of the spaces they note that neighborhood centers consisted of smaller venue for gatherings, clubs for youth and the elderly, exhibition space and the office along with the small shops (Fig. 3).
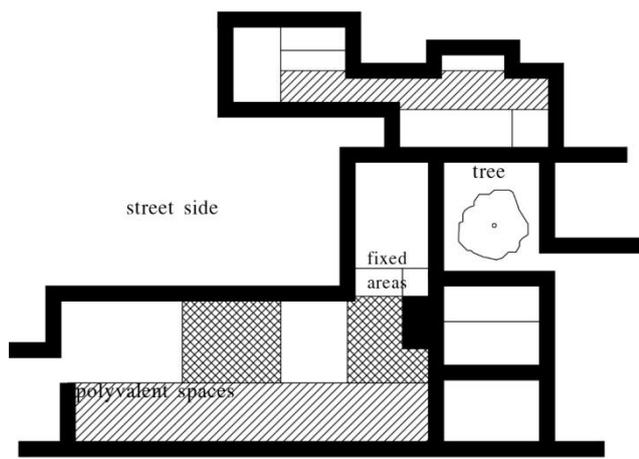
Fig. 3 Cerak Vinogradi's neighborhood center at the ground level – different spaces for multiple uses (Source: Author)

The life of those spaces initiated their dynamic temporary use already in the first four years of usage. It showed that these spaces were the only ones for various activities in the whole complex. Until the school was built in 1985. the neighborhood center rooms were used as classrooms. In the South neighborhood center spaces were used for a ballet school for the children from Cerak. However, the initiative for the reestablishment of the institution Culture center Cerak, was established in 2019 (Superste, 2019).

5 Conclusion

Demonstrating the new ways of designing with an accent on common areas in Cerak Vinogradi shows the value of shared spaces as an integral part of the living areas.

Although Rabinowitz deals with common areas as a general group using the guidelines, Milenković notes guidelines that can facilitate the design of common areas to have a proper relationship to each other and the residents. That leads to the better organization of the whole residential complex, with gradually growing semi-public spaces.

Hierarchy of spaces and their collective intensity are parallel to each other. Planned and spontaneous use criteria is somehow more separated and has multiple factors. Medium spaces - the neighborhood centers are the ones that are used the most. Rentability of these spaces was provided within the building cost of the residential buildings. On the other side the local community center was physically and financially separated unit and that resulted as a failure.

As the whole complex of Cerak Vinogradi was proclaimed a cultural property it shows that these residential complex was recognized as valuable and necessary to preserve in the future

One of the problems that this paper did not examine the question of ownership. How can residents/owners coordinate common areas, when they feel the space as their own and see value in common areas? That however, can start with proper design and architects' anticipation of usage.

Acknowledgement

References

Belgrade City Institute for the Protection of Cultural Monuments, "Spomenici culture" (Cultural Heritage), [online]) Available at: http://beogradskonasledje.rs/kulturna-dobra/gradske-opstine/nepokretna-kulturna-dobra-na-teritoriji-opstine-cukarica, [Accessed (30.06.2019) (in [Serbian]).

RTS, "Blok 23 i Cerak deo stalne postavke u muzeju MOMA", [online] Avalilable at: http://www.rts.rs/page/stories/sr/story/16/kultura/3650741/blok-23-i-cerak-deo-stalne-postavke-u-muzeju-moma.html, [Accessed (15.09.2019)] (in [Serbian]).

Docomomo Serbia, 2019 "Registar moderne arhitekture i urbanizma u Srbiji 1945-1990"(Registry of the modern architecture and urbanism in Serbia 1945-1990), [online]) Available at: http://www.docomomo-serbia.org/dokumentacioni-dosijei/, [Accessed (20.06.2019) (in [Serbian]).

Marušić, D. (1975) Prikaz konkursnih projekata 1965 – 1975 (Presentation of competing projects 1965-1975), Arhitektura i urbanizam, 74-77, (in [Serbian]).

Marušić, D. (1979). "Centar susedstva naselja Cerak Vinogradi" (Center of the neighborhood of Cerak Vinogradi), In: Stanovanje 2 (Housing 2), Posebna izdanja, br. 9, Institut za arhitekturu i urbanizam Srbije, Beograd, Serbia (in [Serbian]).

Marušić, D., Marušić, M. (1987). "Cerak 1 i Cerak 2, Cerak u 20 slika" (Cerak 1 and Cerak 2, Cerak in 20 images), in Jarić, M. (ed.) 40 godina građevinarstva Socijalističke Republike Srbije, Izgradnja, Belgrade, pp. 127-36. (in [Serbian]).

Milenković B. (1979). "Napomene za jednu temu 2" (Notes for one topic 2), In: Stanovanje 2 (Housing 2), Posebna izdanja, br. 9, Institut za arhitekturu i urbanizam Srbije, Beograd, Serbia (in [Serbian]).

Rabinowitz, D. (2012). "Residual residential space as commons". International Journal of the Commons, 6(2), 302-318. DOI: http://doi.org/10.18352/ijc.300

Superste, "Kulturni centar Cerak",   [online] Avalilable at: https://www.superste.net/project/kulturni-centar-cerak/, [Accessed (02.09.2019)] (in [Serbian]).

The Development of Public Spaces in a Post-Socialist City Influenced by Public-Private Partnerships

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Abstract

This article considers the issues of changing the role of public spaces in the post-Soviet city and the impact of socio-economic processes on the patterns of functioning and transformation of the planning structure of urban public spaces. It analyzes examples of transformation of open public spaces of a socialist city. The most effective directions and main methods of their social and spatial transformation are singled out on the basis of the analysis of domestic and foreign experience influenced by public-private partnerships.

Keywords

Public-private partnerships, open public spaces, post-socialist city, the transformation of socialist open public spaces

1 Introduction

The public spaces formed as a result of centralized urban planning activity are very typical for Russia and Central and Eastern Europe as well. They were regarded as territories of demonstrations or mass processions, which is why they are imbued with a ceremonial character as a response to the ideological tasks of social development. (Kosenkova, 2014; Meerovich, 2004; Hmel'nickij, 2006). Changes in the socio-economic and political conditions led to a rethinking of not only the appearance, but also the values in the city. Today the problem of these spaces is that it has lost their original functions and in many cases empty and uninhabited. While public life in the city is becoming more active and requires multifunctional open public spaces. (Hmel'nickij, 2006). In turn, multifunctionality implies a variety of public-private partnerships, which involves collaboration of state, business, public organizations, individuals, different levels of business. In addition, it features increased demands for the quality of urban spaces. A wide range of requirements indicates the need to improve methods for updating them. The main public spaces of the former Socialist city became the subject for analysis. Those spaces were intended exclusively for ceremonial mass events, which did not imply other democratic and multifunctional use in the socialist period. In this context, becomes relevant the study the main social and planning

transformations which have occurred in open public spaces and lead to the change of urban form of open public spaces.

2 Measurement and analysis of the transformation of socialist open public spaces

The methodology from the study of public spaces in Germany and Russia cities is:

- site survey;

- analysis of contemporary development policies of public spaces, namely: management activities, planning documents and federal programs (Social city, General planning strategy of the historical center, Formation of comfortable urban environment), interviews, public hearings and partnership planning;

- examination of project documentation: project decisions, cadastral maps and archive material.

2.1 Restoration of the traditional morphology of medieval Europe

By the end of the 20th century, in the planning sphere there was a return to the general urban development trend of searching for a rational dense city. There was also an awareness that amorphous public spaces should be returned to their traditional morphology. This tendency is characteristic for Eastern Europe cities. During the reconstruction process, the socialist spaces are

transformed into democratic public spaces attractive for investors and residents. An example of such transformation is the Old *Market Square, Altmarkt in Dresden (Germany)*. In the period of the GDR, the lifestyle of the old market square Altmarkt was revised - it had to correspond to the tasks of a socialist city and organize political and cultural life. As a result, the square received a large demonstration space without clearly defined boundaries due to the removal of the ruins around it. Within the framework of the urban development program, a decision was made to modernize the square by reconstructing the historical layout and the organization of underground parking. Such a decision was made based on the results of an urban design contest held in 2000. The project was implemented through joint efforts of the public and private sectors. The original size of the square was restored by building its southern part with commercial and office buildings. On the east side, there were five fountains arranged, which mark the old border of the square, repeating the outlines of the foundations and residential buildings destroyed during the war that were found during archeological excavations in 2007. Underground parking with exits to the square was built in cooperation with a private company Q-Park GmbH & Co. KG, which was interested in investing in order to profit from the future functioning of the object. According to the planners, the democratic nature of this space is in its freedom from various political and symbolic signs. The area has received a neutral space that is flexible in its use and is ready to accommodate a variety of functions. At present, the square meets the interests of the population, public organizations, administration and business through the organization of the market and major city events: festivals, concerts, sports events, Christmas markets, and other activities, which are held on its premises.

2.2 Change in the planning structure under the influence of small and medium-sized businesses

The structure of open public spaces was radically changed with the introduction of small and medium-sized businesses, which led, firstly, to a change in their scale, planning structure and, accordingly, the increase in the flow of users. In the post-Soviet period, public spaces were transformed into consumption spaces. Investors demanded to re-plan the A*lexanderplatz square in Berlin (Germany)* and its environment. The core task was to rearrange the empty, wasted space, which was formed during the reconstruction of the GDR as the center of East Berlin for the exhibition of achievements. To carry out

large-scale public events, the transportation system was changed: the flow was diverted to the perimeter, and the tram tracks were disassembled, due to which the square's territory increased 4 times. In 2000, a plan for its development was adopted as a result of an urban design competition where it was projected as a multi-functional city hub, which would follow the basic principles of functional separation and transport accessibility. Tram lines were returned to the square, underground stations were restored and underground parking was organized. During reconstruction, significant attention was paid to strengthening the trade function, which led to the densification of open space development through the expansion of the central department store and building of new shopping centers. The square became more isolated with clearly fixed boundaries, thereby reducing the previously hypertrophied scale. In 2014, private inverters and trading company owners proposed to revise the draft of the general plan of Alexandplatz Square in order to increase the profitability of the area by raising the density of buildings. In 2015, the draft of the general plan was adjusted through an agreement among private and public actors at public seminars attended by politicians, city administration, business representatives, experts, population and other stakeholders. Discussions at the workshops took place in two stages in order to develop a design solution that combined the improvement of existing buildings, cultural heritage sites and public spaces. The first workshop was organized in a form of a dialogue with experts and citizens to assess the opportunities and perceptions of future development of the territory with a focus on public spaces. The second was a discussion of the new general plan with all stakeholders. As a result, public discussion took into consideration the public need for green spaces, quiet recreation which would be addressed through a system of public spaces around the square, thus retaining the function of Alexanderplatz as a city square for social contact and mass events, which would increase the attractiveness and strengthen the image of the area. A balance of interests is achieved through the mixed high-density development at the perimeter, where more than 30% of the housing is expected to be built and the first floors, which will be actively used by business to revitalize the edge of the square.

2.3 Adaptation to modern conditions and requirements

Transformation of the existing spaces built under the socialist system occurs through change in their functional content and the associated "de-sacralization" (Vendina, 2009; Antyufeeva and Ptichnikova, 2017). The principle of erasing socialist symbols from public spaces and the adaptation of the latter to modern needs can be seen in the example of the reconstruction of the *Prager Strasse in Dresden (Germany).* The street was built in accordance with 1960s GDR planning techniques, where large fountains along the boulevard were built over a huge area. Prager Strasse was to be perceived as a collective meeting place. With a targeted marketing strategy, the administration attracted large trading companies to revive the space. The new structure of the street after reconstruction gave another meaning to the open space. On the one hand, the post-war modernism ensemble remains legible as a forming composition. On the other hand, it was functionally transformed into a popular pedestrian shopping street - Shopping Mall.

On the north and south sides of the street, new commercial buildings were built, forming the square in its central part, where were fountain, rest areas, and so on. Reconstruction of the square with the installation of a fountain, places for greenery and recreation was performed using means of repairing damage after the flood. On the western side's ground floors, there appeared a new residential block with commercial services. They attracted investors through selling to the latter land plots below market value.

The project of reconstruction of *the Sovietskaya Ploshchad (Soviet Square) in Voronezh city (Russia)* provided for the creation of a modern multifunctional site in the city center within the framework of a priority project called "Formation of liveable urban environment". The initiator of the program was the non-profit organization (Foundation) "DOM.RF", created based on directives of the Government of the Russian Federation and aimed at the implementation of the program to create a favorable environment for individuals and society. Discussion of project solutions took place at a public hearing, where residents expressed their opinions on the project, made comments and suggestions. The square has changed its function and has become the main point of cultural attraction for the citizens of Voronezh: city festivities, such as the International Platonov Festival of Arts, are held here all the time. The main value of the project is the harmonious functional zoning of the space: the needs of all user groups were taken into account by

bringing together the wishes of the population identified during a public discussion. The square is nominally divided into two distinctive parts, relative to the dominant objects located on it. The area in front of the Concert Hall and the Dancing Fountain suggests active pastimes. There is a playground with modern equipment for children of all ages and a green area with places for picnics and outdoor games. At the other end of the street, opposite the Pokrovsky Cathedral, there is a recreation zone. New recreation areas have been created here. The Pokrovsky Cathedral itself received a square for fairs, celebrations and festivals. The Sovetskaya Ploshchad was renovated, benches were replaced, navigation, modern street lamps and landscape lighting of trees were installed, which made the space comfortable and safe.

In the Russian experience, the Federal Programs for the Formation of Public Spaces are designed to stimulate civic activity, but the democratic participatory design is still in its formative stage. The population participates in public hearings to discuss completed project solutions for expressing opinions and suggestions for adjustments, but the participation of all stakeholders at the stage of forming goals and setting objectives is only beginning to emerge.

One of the unique examples of initiatives in planning practice is the project of reorganization of the Karpovka river embankment in Saint Petersburg (Russia), which was developed through the participatory planning at the initiative of the activist community with the support of the district administration. The community, in cooperation with the district administration, analyzed the current state and potential of the territory's development, held talks with residents and visitors, conducted interviews with owners of various businesses near the embankment. Proposals on the embankment development concept were created based on the information received. In order to develop the project and set goals, participatory planning meetings were held to discuss all changes in the area with the residents in the most detailed manner. The main objective of this dialogue was to find compromises between different population groups. Citizens offered their adjustments at all stages of the project. The embankment development plan was divided into stages. The first stage was implemented in 2019. The embankment witnessed the emergence of a waterfront slope, recreation areas, children's playgrounds, an art zone, bicycle lanes with bicycle parking and an amphitheatre for mass events. The work on the

reorganization of the embankment will continue until 2021 and the projects will be carried out through participatory planning.

2.4 Preservation of the planning structure as a symbol of socialist order

Public spaces become a symbol of socialist order through the preservation and maintenance of the original form. Former politically significant public spaces are shifting towards symbolic representativeness (Bittner, 2006).

The reconstruction of *Revolution Square in Krasnoyarsk city (Russia)* was directly linked to the preservation of the urban planning ensemble, the return of the original geometry and social function, which provided for a new functional content: swings, hammocks, playgrounds, and places for recreation. The renovation project for the square was implemented through the private investment of RUSAL under a memorandum of cooperation between the city administration and major regional business structures to address urban development issues.

3 Conclusion

Collaboration of the public and private sectors, as well as the community, is becoming increasingly important at all levels of urban development, especially in the formation of public spaces. The aim of this interaction is to combine classical planning tools with methods of cooperation with all stakeholders involved.

The analysis of the experience of the public spaces reconstruction shows that private partnership relations consist first of all in the realization of the problem, setting the task and building the common goals through participatory planning. Secondly, they are implemented in the form of the project solutions, which presuppose open access to the public spaces for all interested parties. The initiative for such projects may come from local authorities, business representatives and active communities representing the interests of the population.

A comparative analysis of the transformation of public spaces under the influence of private and public relations shows that in Germany, the partnership begins at early stages and is continued throughout the whole process of planning. In Russia, however, such this trend is only in its infancy. Russian planning experience demonstrates that the stage of democratic participatory planning is actively implemented only in the form of public hearings to discuss the proposed project solutions. To respond to social and economic changes, today there emerges a need for participation of all interested parties (authorities, business, citizens, experts) at a goal-forming stage for the maximum-effect targeted change of public spaces. Currently, within the framework of federal programs for public space development projects scheduled for 2020, there is an emergence of practices of participatory planning. The latter are viewed as a mechanism that can improve the quality of the project, increase their effectiveness and as a tool to reduce social conflicts, thus recalling the German experience.

International experience of studying alternative methods of public spaces development is pivotal for designers and researchers to exchange, study and use in the future for solving similar problems.

References

Antyufeeva, O. A., Ptichnikova, G. A. "Arhitekturno-prostranstvennaya evolyuciya obshchestvennyh prostranstv postsovetskogo goroda" (Architectural and spatial evolution of the public spaces of the post-Soviet city), Volgograd State University of Architecture and Civil Engineering, 47(66), 2017, pp. 524-534.

Engel, B. "Public space in the Blue Cities in Russia", Progress in Planning, 66 (3), pp. 147–239, 2006.
https://doi.org/10.1016/j.progress.2006.08.004

Hmel'nickij, D. "Izmenenie funkcii obshchestvennyh prostranstv goroda kak odna iz prichin arhitekturnoj reformy v SSSR" (Changing the function of public spaces of the city as one of the reasons for architectural reform in the USSR), In: Engel, B. (ed) Obshchestvennye prostranstva v postsovet-skom gorode, TUDpress, Dresden, Germany, 2006, pp 13-21. (in Russian)

Kosenkova, Yu. L. "Struktura obshchestvennyh prostranstv v gradostroitel'nyh koncepciyah sovetskogo perioda" (The structure of public spaces in the urban planning concepts of the Soviet period). Academia. Architecture and Construction. 4, 2014, pp. 93-97. (in Russian)

Meerovich M.G. "Arhitekturnoe prostranstvo rossijskogo goroda: proshloe i nastoyashchee" (Public spaces in Sotsgorod (20-30s) and current problems of their use), Sociologiya goroda, 1(2), 2009, pp. 47-51. (in Russian)

Mehlhorn, D-J. "Stadtbaugeschichte Deutschlands", Mehlhorn, D-J ed., Reimer, Berlin, Germany, 2012.

Voisin-Bormuh, C. "The Design of New Spaces in the City Centre of Dresden After Reunification", In: Madanipour, A., Knierbein, S., Degros, A. Public space and the challenges of urban transformation in Europe, Routledge, London, UK, 2014, pp. 78-90 .

Vendina, O. I. "Chastnoe i obshchestvennoe v gorodskom prostranstve: ot teorii k moskovskim realiyam" (Private and Public ib the Urbane Space: from the Theory to the Moscow Realities), Izvestiya RAN (Akad. Nauk SSSR). Seriya Geograficheskaya, 2, 2009, pp.28-38. (in Russian)

Bittner, R. "V poiskah novoj social'noj sfery" (In search of a new social realm?), In: Engel, B. (ed) Obshchestvennye prostranstva v postsovet-skom gorode, TUDpress, Dresden, Germany, 2006, pp 29-39. (in Russian)

Segregated Neighbourhoods and their Integration Attempts: Revisiting Pécs-Kelet

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Abstract

Informality is nowadays an inevitable feature of many cities around the world that urban planners cannot dismiss anymore. Once white spots on the map, they require for integration into the body of the city not only on a physical but on a social level as well. Neither land deprivation nor completely new housing construction on such segregated areas gives a real solution as government resources decrease and if human rights are considered. To a global phenomenon, however, only local answers are proper. Pécs-Kelet, containing a loose concentration of segregated areas on the North-East edge of the city of Pécs, is notorious of being hit by poverty, unemployment, overwhelming presence of Gypsy minority and living conditions of a slum. As a former mining-settlement, it carries the legacy of those post-socialist cities where heavy industry was once the key driving force of economic prosperity. On the periphery of the city, it longs for integration socially as well as economically into the main body of the city. The social rehabilitation project of Pécs-Kelet, carried out between 2012-15, demonstrates an approach rarely considered by urban planners: the importance of social preparation, making the inhabitant ready to accept the change. We shall see a process-design in a post-socialist context, in which the order of interventions is key for a sustainable urban renewal project.

Keywords

#social rehabilitation #segregation #informal settlement #post-socialist

Introduction

"Accepting the informal city as an unavoidable feature of urban condition" is an idea that is slowly gaining recognition among urban planners and city decision makers around the world[1]. Informality is by now a sort of living condition that is characterized by reduced or lack of access to basic urban infrastructure, being physically or mentally on the periphery of the urban society. Varying in size but independent from location, we find these conditions anywhere around the world and it would be a mistake to assume that Europe has grown out of the problem already. In post-socialist countries, now cities need to deal with the legacy of the heavy industry from the past out of which former mining settlements constitute a particular case. Often places of deterioration, these settlements are condemned to segregation of society.

Pécs-Kelet (Pécs-East) has been bearing such informal conditions and the attempts of social rehabilitation of the recent years have evolved into a reference project in Hungarian urban and sociologist professions. As such, it

is worth a deeper analysis and will be the topic of this paper, from a point of view of urban process design.

Apart from the history of the rehabilitation process, I was interested in the social sustainability issues of the approach. The case study of Pécs-Kelet points out an aspect somewhat neglected in urban and architectural discourses: physical interventions in segregated areas are only effective and long-lasting if the local residents are prepared with years of social work for the enormous change that awaits them. The key of sustainability – we shall see – in this case are site-specific answer and social coaching.

Beside the realized field-work, an important aspect is the investigation of the background. In the urban tissue the organizing force of mining is clearly legible, and the abrupt change that is the disappearance of the mining industry is held responsible for the emerging informal conditions on the periphery of the city.

The analysis of the rehabilitation program is based on interviews with local coordinators, in particular Dr.

Katalin Kovács, coordinator of the rehabilitation process at municipality of Pécs. Besides, fieldwork observations and interviews with the inhabitants were conducted on-site in Györgytelep and Pécsbánya.

Informal settlements – global perspective, local solutions

The accelerated growth of cities and the ever expanding population of city-dwellers have brought along informality, a term coined to settlements where density and inhuman living conditions are decisive. UN Habitat estimates, the 1 billion people around the world live in circumstances of informal settlements, ie. neighbourhoods that "lack formal supply of basic infrastructure and services, public space and green areas, and are constantly exposed to eviction, disease and violence". [1] In the first United Nations Conference on Human Settlements, as early as 1976 and in the second in 1996, UN identified informal housing processes as one of its core concerns and urged urbanists and city decision makers to confront and deal with the problem and named "reversing the tide of segregation and rebuilding cohesion" as one of the great tasks of the century.[2]

In the first two decades of the new millennium, city leaders have started to acknowledge slums as part of their cities and begun to seek new tools that replaced evictions with slum-upgrading. The key lie in the way of *integration* into the main body of the city, working both with social and architectural tools.

Whilst urban rehabilitation is traditionally a top-down act, the challenge is to achieve complexity. Building and upgrading infrastructure will be pointless, unless various local stakeholders take part in the planning process and unless the needs and circumstances of the inhabitants are analysed in depth. Involving more actors to effect the decisions, in particular the slum-dwellers themselves will result in a complex and sustainable result, referred by UN Habitat as *participatory slum-upgrading*.

In the following case-study we will see an urban rehabilitation project, where complexity appeared in a seemingly top-down context: the municipality of Pécs was the initiator but worked together with NGOs that had been present on-site for years and engaged with the inhabitants. Thus the project became site-specific not only with its infrastructural but also with its social interventions.

Post-socialist heritage

Pécs is a clear mirror of its past industrial development, of which the most influential was the mining industry, especially in the post-war period. In few other Hungarian cities are urban planning and industry so interconnected as here, since two main parts of the city were built upon mining: Pécs-Kelet on the North-East fringe on coal-mining, with a history of 150 years in total and Uránváros on the Western peripheries, concentrated around the excavation of uranium.

Residential building supply for the mine workers reached 2335 apartments in Pécs-Kelet in 1945[3]. All were constructed with a big variety in comfort but often low quality and at the very proximity of the shafts, on the edge of the city. Named miners' colonies, these were enclaves themselves, as food supply and education (schools) were organized within the settlements. From the 1960s on, Pécs (coupled with the town Komló) was the country's main supplier of black coal and uranium.

With the decline of heavy industry and the change of the energy-market structure, the coal excavated in Mecsek quickly lost its value and its commissioners. In 1991 the largest coal mine conglomerate of Mecsek was closed down and until 2004 the remaining mines were wound up. This was an abrupt change for the city and its inhabitants: the city lost its main tax income, 7500 people lost their jobs in the mines and with the related jobs cancelled, a significant percentage of the working-age population became unemployed or were retired early. [4]

Map.1. Location of the five segregated areas in Pécs-East, at the edge of the forest: 1. Györgytelep 2. Hősök tere 3. Pécsbánya 4. Shaft István 5. Pécs-Somogy, Shaft Rücker (source: openstreetmap.hu, author)

Drifting towards segregation

The decline of job-supply has triggered a spiral of segregation as well: our time, the former mine workers either moved, remained there unemployed or died. Physical deterioration of housing had become more and more flagrant, as the houses got older and had actually never been in good condition due to their low quality. The flux of inhabitants was also significant: empty flats were filled up with the poor and a significant ratio of Roma.

Emigration, aging society and physical deterioration were amplified by the lack of transport infrastructure: large number of the settlements in Pécs-Kelet were built literally around the mines and those living there slowly lost contact with the outside world. The most extreme settlements were not only on the edge of the city but also in the forest.

During the 80s and 90s the process of segregation had been evolving in silence and by the 2000's the municipality was already talking about segregated enclaves and shadow settlements.

The process of social rehabilitation

Today we talk about a successful social urban rehabilitation project that involved 5 main project areas, effected 3500 people directly and got 110 apartments rehabilitated. The urban rehabilitation project was organized around series of EU subsidies, starting in 2012. The five areas chosen had the advantage that their residential and public buildings were all municipality owned.

The first two projects, under the frame subsidy of TÁMOP (Operative Program for Social Renewal) and the UNDP (United Nations Development Program) ran between 2012-2014 and aimed to re-engage the inhabitants of 5 settlements (see map-1). Development of social capacity and citizen participation was its aim, which in reality meant a series of social coaching programs: from education of basic skills for certain jobs, child education, health-care, to community development. The municipality worked in cooperation with a number of NGOs, most important of them the Maltese, who were present on-site since the early 2000's.

Built upon the former, the next subsidy, TIOP (Operative Program for Social Infrastructure) ran between 2014-2015 and brought the infrastructural renewal. Houses were renovated, enlarged or merged and received sanitary with the help of their inhabitants trained in the previous project

as mason or carpenter. The former cinema on Hősök tere, closed down for 22 years, was rehabilitated and now functions as community house. The main staircase that serves as main pedestrian street on the steep terrain of the settlement was reconstructed by the community.
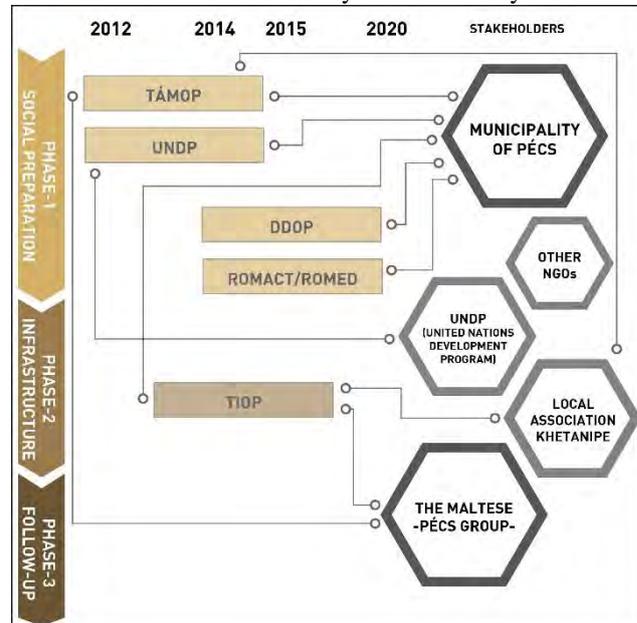
Fig.1. Process Design map illustrating the realized urban rehabilitation – interrelations of actors and subsidies (source: author)

The following EU-funded projects, ROMACT and DDOP (Operative Program for South-Trans-Danube Region) have continued on the same path of social preparation first and infrastructure as next step, focusing on further areas (Pécsbánya, Shaft István, Shaft Rücker).

In brief: all inhabitants stayed in place, except for 35 families who were relocated to apartments elsewhere. Houses received isolation, were renewed and their density diminished. In each of the five project area the renewal meant: one public space, the residential houses, the creation of a community-house (aimed at children and adult programs) and of a social-house (place of individual help of social-workers, including psychological support). 2015-2020 is the time of follow-up and background support. Social workers are still daily on site.

Current life - Sustainability considerations

The urban rehabilitation project of Pécs-Kelet points out the importance of process-design. Its actors underline that deep analysis and social upgrading before any infrastructural intervention is inevitable and are responsible for sustainability. Intervening in the surroundings of people at such scale means an abrupt change that is going to affect their whole life, to which the inhabitants ought to be prepared by years of social work.

Participatory slum upgrading in this case meant planning and discussing the intended infrastructural interventions with the inhabitants, as well as realizing the upgrade with them so they appreciate it on long-term.

The difficulties, however, to be considered are:

- It is time-consuming: the time of preparation (social programs) is 1-3 years and the follow-up involves another 5 years on site after the project has finished.

- It is labour-intensive: social coaching requires daily presence of social workers and their personal devotion.

- It is subsidy-dependent: as municipalities have less and less tax income (especially in Hungary), they become more and more dependent on EU subsidies. This in turn cannot guarantee the succession of projects and is very much limited by the project time-frame. As such, it makes the process hard to plan on long-term.

- It costs as much to rehabilitate as to build new: the state of the buildings as well as the social network of the given slum ought to be examined in order to come to the best decision, whether any given slum is worth to keeping.

References

[1] Habitat III Issue Papers – United Nations Conference on Housing and Sustainable Urban Development – 22 Informal Settlements

[2] Justin McGuirk – Radical Cities: Across Latin America in Search of a New Architecture – p.27. Verso, 2015

[3] The History of Mining in Mecsek – A Mecsek bányászatának története, in: http://www.kbm.hu/hu/taxonomy/term/19 (exhibition material)

Doug Sanders: Arrival City. Pantheon, 2010

Ekim Tan: Interweaving the formal and the informal. In: New Towns for the 21st century. Sun Architects, 2010

Katalin Füzér: Probing Participatory Urban Development: ECoC and Urban Strategies in Post-millennial Pécs. In: Culture and Growth: Magical Companions or Mutually Exclusive Counterparts?, 2014

Photo-1 & 2. Pécsbánya: Before and after the rehabilitation (source: dr. Katalin Kovács)

What Happens with the Mining Colonies in Former Industrial Cities?

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Abstract

During the socialist administration a lot of industrial locations became cities. The new cities have grown closer to the industrial exploitations, but forgot about the old mining colonies houses which had been built for workers when the exploitation began, in the XIX century. Even though the socialist blocks have risen quickly, the mining colonies continued to exist and be used to this very day.

This is the case in many industrial areas in Eastern Europe and also in Romania. The area on which this research is focused on is called Jiu Valley, and it is the place where the extraction of carbon is the main industry.

My research focuses on the "how": how the houses from mining colonies and the socialist apartments somehow found a way of bonding, of working together and how they can work in the current society, where technology changes everything and the main industry from those small cities is close to its foreseeable end. Unfortunately, the kind of problems that overwhelms Jiu Valley at the moment of speaking are not the ones with regard to the end of the mining colonies in general. All over Eastern Europe former industrial cities confront the same issues, but in different contexts. There is constantly someone that would try to tackle various aspects of the solution of the core problem, i.e. losing the main source of existence of small cities.

Keywords

Mining Colonies Architecture Regeneration

1 Introduction

Mono-industrial cities of Romania are in the period of full decline because all those cities have lost or soon will lose their main industry. The cities of Jiu Valley are now in the period of decline and the big question everybody is thinking of refers to: "What's next?".

This paper talks about three different time periods of the industrial cities from Jiu Valley. The study begins with the times when the mining colonies were built, which consists of the first period of the cities establishment. It is followed by the socialist period where the typical industrial city development reaches its maximum. Furthermore, the third period of the industrial cities refers to the times of today.

An urban point of view, as well as an architectural one, will emphasize along the paper, the journey of the mining colonies, from their birth to this moment.

The mining colonies from Jiu Valley were established at the mid of the 19th century, being constructed in the same manner as the Habsburg empire's. Six out of the total of eight cities of the Jiu Valley were built in the surroundings of exploitation mines. Starting from the second period, i.e. the socialist times, the colony settlements were replaced by block buildings. Moreover, full neighborhoods built only of blocks started to be developed, and thus soon the cities began to expand till the point of building new socialist cities from scratch.

Nowadays, the industrial cities are in continuous decline because of the extinction of industry even though the human settlements still exist. Unfortunately, the degree of degradation increases more and more every day making the future of mining colonies uncertain, are rather tilt towards decline as well.

For a better understanding of the mining colonies, we will focus in particular on mining town called Petroșani, which is the biggest one in Jiu Valley.

2 Petroșani from the city beginnings

Before the mining exploitation, Petroșani was just a village with a few houses. In 1874 the first colonies started to appear. In 1923, the same village became a town of 3 colonies and a center which grew spontaneously, which was declared a city only a year later.

In 1980 the entire city suffered a lot of changes because of the socialist interventions. Only one colony remained untouched, the rest were demolished and in their place appeared new communist blocks.

In the following urban plans, the city is presented over the years from when it was just a village to today's city situation.
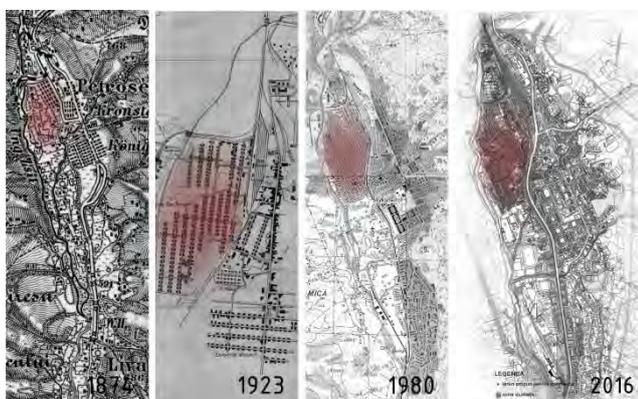

Fig. 1 Map of Petroșani from 1874 (the biggest colony is mark with red); **Fig. 2** Map of Petroșani from 1923; **Fig. 3** Map of Petroșani from 1980; **Fig. 4** Map of Petroșani from 2016

We can see how the city has grown over the years, but in contrast we can see how the biggest colony of Petroșani is physically separated from the rest of the city by its main railroad.

Taking a look from an urban point of view, the colony is an important neighborhood of the city which has a particular shape and atmosphere, but still represents the city or its beginnings and should never be brought in isolation from the rest of the city.

2.1 Mining Colonies

Mining Colonies are an ensemble of individual residences developed around an exploiting mine. They have been built with a regular street plot and consist not only of human houses, but also of some other types of constructions. Some of the latter are: the Labor Casino (which aims as a community center), the Communal Bathrooms, a kindergarten and a universal store. Besides the residences, the mining colonies would always be

established with a series of facilities such as: stoves and fountains on each street, needless to mention the railroad for the train that would bring supplies for the houses. (fig. 5) The diversity of the people coming from all over the country or the empire has brought the construction of several places for worship. Simultaneously, this aspect has brought a variety of cultures, all learning to live together. (Velica & Burian, 2018)

The colonies are usually divided taking into consideration the social classes. There are colonies for upper class workers, for lower class ones, or completely different neighborhoods inside the same colony for both types of workers. For dividing the zones inside the same colony, the houses can be considered as a differential aspect. The upper class workers' houses would be dimensionally bigger than the other class's and would consist of more than a bedroom, a kitchen and a storage room, as of the lower class houses. However, both types of residences would be provided with an individual garden where the inhabitants could grow vegetables or fruit per strict necessity. Although the actual houses do not present any special architectural traits, the ensemble itself represents a peculiar one thanks to it benefiting from a series of connected functionalities that bring great help in expanding the community from outside its core, i.e. the mine.

Fig. 5 One street in Petrosani, colony neighborhood when the train was fuctional. Photo from the personal archieve of Velica Ioan

In the beginning, the colony was built by the owner of the exploitation and its purpose was that only the people who worked at the mine could live in one of those houses.

Over the years, the administration has changed and also the political regime and of course the status of the person who owned the colony. In our times all the houses are private properties because the people, who live in one of those houses at the moment, could've bought it after the communist administration was changed.

As we can see from the description above, the colony house could provide only the basic necessities of a family, but the times and technologies has changed and also the necessities of a person. In this case the questions that follow are: Can a colony adapt to contemporary necessities? If we try to adapt the houses, can we keep the atmosphere and image of a colony? In which way can the colony relate to the new city?

2.2 The New City

The socialist period brought several town planning development programs that would not prioritize the growth of the colonies. The new block buildings offer such apartments that are able to respond to the needs from those times. In addition, they can provide shelter for a larger amount of persons.
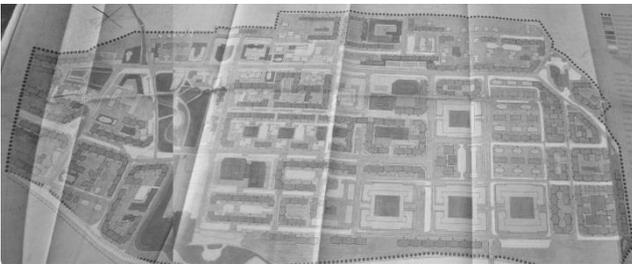

Fig. 6 Petroşani systematization plan for the city center (1978 – Romanian archives)

Consequently, some colonies have been torn down in order to provide reasonable space for the new building neighborhoods, or others have become stand-alone neighborhoods inside the ongoing development of the city.

The apartments of the 20th century building could meet more of the inhabitants' needs than the mining colonies. (fig. 7) As a result, the migration from colonies to socialist apartments began. The ones that did not want to leave the colony would start adapting their typical houses by reconstructing or redesigning it to meet their needs as well as a block apartment could. In contrast, some of the functionalities of a colony house have started to lose their necessity, thus would gradually disappear or get new functionalities. (Tulbure, 2016)

Fig. 7 Socialist blocks built between 1960-1970 in Petrosani. Photo from the personal arcieve of Velica Ioan

3 What's next?

Unfortunately, because of the mining industris ongoing disappearance from Jiu Valley, there comes the question: towards what are these cities heading to? Would the specific Detroit phrase ("Would the last one who leave the city, please, turn the lights off?") be reborn on Romanian soil? (Oswalt, 2004)

Perhaps the answer might be "no" thanks to the ongoing projects of regenerating the area through a variety of methods based on culture and tourism in spite of the real critical situation of several zones that are still left in decay. The negative answer is certainly not always viable, but in the case of the Jiu Valley cities is increasingly gaining much more trustworthiness within each day.

On account of the rehabilitation programs, the transformation of the colony becomes possible. The typical colony house can be restructured as potentially touristic rentable accommodation or crafting workshop areas, taking into consideration the cultural diversity of the place.

Ion Barbu, an artist who represents the starting point of "Planeta Petrila" project, uses street art for animating several places in Petrila and Petrosani. Due to his innovative ideas of rehabilitating the declined construction that no one wants or needs, there a bigger project can and should be established for the colonies. As an example, repainting the colony houses as a way of giving each and every one of them its own identity would be a great step towards the goal of keeping the colony alive, hence keeping the city lights on. Moreover, the homes could host exhibitions or movie projections for smaller audiences.

The regular street plot mentioned above offers the possibility of marking interactive walking routes in between the houses, and eventually creating tiny narrow streets. On top of that, the public institutions, such as The Labor Casino, can reopen their doors for the benefit of the whole community. (Paun Constantinescu, 2019)

Therefore, the extinction of the mining industry does not necessarily mean the vanishing of the cities, nor of the colonies, but rather an adjustment of them to the new ways of living and current needs of society.

Let's say that there are some official answers to how a city in full decline can save itself, but before starting to apply them, we must acknowledge a common level of devotion and strength for being part of the salvation. Moreover, what we must neglect is the unfulfilling emotion of the current situation that can easily get to us. Unfortunately, Petroșani has a lot of constructions unoccupied and unused. From its glory days till today, we can see only the remaining structures, which conjure a very sad image.

To sum up, the socialist administration has left a big mark on the city. And this changed the full image of it. From small houses and colonies, the city has now entire neighborhoods of blocks that surround the colony neighborhoods – where, in fact, the socialist mark is not so present. However, the separation between the colony and the socialist part is hard to miss and not because of the railroads that isolate the urban from the colony.

4 Conclusions

On the whole, what we know is true it's that more than the needs of the society, but its requirements have changed and cannot be satisfied by the proposed ways of living of the 20th century. In spite of this, bringing into perspective the implementation of specific adjustments of those proposals to the current requirements means reviving what history has left us. Even though the city's decline discussed above is imminent, after the process of it being taken as such, there should definitely be developed revitalization projects for the sake of not losing the only cities once known as mono industrialized cities.

As a result, the culture and tourism can help in the Jiu Valley, and more specific for Petroșani thanks to what others have thought of by rehabilitation projects through their existing programs.

In this last picture, the entire city can be seen with all the marks left by the different periods of time that have passed through it. Maybe not all of them were good, but I believe that in order to keep the city on the map, we have to work now with what they left us and find a way of transforming the decay scars into a form of beauty.

Fig. 8 Layer over layer – mining colony, socialist blocks and native people houses – all from Petroșani, Jiu Valley (photo source: http://lightshadefx.com)

References

Velica, I., Burian, S. C., "Colonia miniera din Valea Jiului", ed. Focus, Petrosani, Romania, 2018.

Baron, M., "Cărbune și societate în Valea Jiului – peroada interbelică-", ed. Universitas, Petrosani, Romania, 1998.

Tulbure, I., "Arhitectură și urbanism în România anilor 1944-1960: constrângere și experiment", ed. Simetria, Bucuresti, Romania, 2016.

Oswalt, P., "Detroit. Shrinking cities working papers", accessed in 20.01.2017, at the website: http://www.shrinkingcities.com/fileadmin/shrink/downloads/pdfs/WP-Band_III_Detroit.pdf, 2004.

Paun Constantinescu, I., "Shrinking cities in Romania", ed. DOM Publishers & MNAC, Berlin, Germany & Bucuresti, Romania, 2019.

Transformation of Mass Housing in Toulouse, Actors and Project Culture

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Abstract

From Kleiburg, Lignon to Tourrasse, part of Toulouse le Mirail, were we tried to develop an approach to promote the capacity of those urban and architectural forms to continue to exist in conformity with their original conception.

Those three cases show us how the question of urban heritage can be approached and can become a lever in certain way to develop a vision for the project. Initiatives working for the conservation of modern architecture are proposing some "tools" to manipulate this heritage, but is this really appropriate, or relevant to today's challenges?

Three cases are presented, from three different contexts in which the actors, their culture, their vision help to build a appropriate answer and remind us, how the architecture produced in the second part of twentieth century can be rich in spaitiality, and innovative. Three cases to understand how the heritage could be a lever for a conscientious intervention in refurbishment of mass housing project. The importance of detection, the moment in wich it has to be summoned during the process of the fabrication of the project. The extend that the recognition of heritage can cover, from the place of the object in history, to the architectural caractéristics even more technicals. Some examples through Europe show haw social part, inhabitant's memory, community can also be part of this heritage and has to considered in strategies of projects. Three cases to understand that this heritage is not, automaticly, incompatible with contemporary energetics and normative injunctions. Three cases to promote the effective quality, still today, of this heir of modern architecture.

Keywords

Modern Heritage, Mass housing, Refurbishment

1 Introduction

"When function isn't here anymore, nothing remains" (Andreu, 2008)

Recent news shows how much the question of the future of mass housing makes sense today and becomes a privileged place for the project. The implementation of the renovation of these architectures questions the capacity offered to the mutation towards contemporary uses and their adaptability to performance requirements in perpetual evolution. Projects cited as examples, promoted by critics appears like exceptions in the landscape of the renovation of large ensembles. The strategies deployed by the actors of this renovation seem to reflect a vision "short-termist" responses to injunctions that are formulated by the context but also opportunistic in the search for associated funding. In Toulouse, as research team, and also architects, we tried to understand what lessons are good to apply from recent cases of refurbishment and how the question of heritage is manipulated.

2 An "upgraded" heritage

The Kleiburg, has become a benchmark in the capacity of the housing architecture produced massively to adapt to more contemporary living patterns.

If the normative questions related to the thermal and environmental performance are not the subject of a specific communication, we can still note the economy that generates the conversion of such a structure in terms of territory and resources in materials.

In 2017, then even more recently in 2019, the eminent Jury of the Mies Van Der Rohe Prize dedicated projects to redevelop this heritage. In 2017, the light was put on a heavy restructuring operation in Amsterdam. The Kleiburg is a relic of the Biljmer district of Zuidoost on the outskirts of Amsterdam. Four hundred meters long, eleven stories high. Built in 1971 by the architect Fop

Ottenhof, the district was designed in 1960 as a series of buildings with corridors, as "high" streets with a plan honeycomb, the ground free, landscaped, for the benefit of pedestrians and cyclists, moving cars on over-elevated tracks.

A renovation of the neighborhood initiated in 1992, isolates the building whose owner maintains it all the same, changing the environment with the arrival of new typologies more "common" until 2009 when it contemplates the demolition. The local authorities are concerned about this disappearance, push the owner, Rochdale company, former owner to review his project. He offers it for sale for one euro at the cost of a competition of ideas without its destination is frozen. It's an investment consortium that comes out laureat with a master idea, the "DIY". The project plans on this principle the renovation of the main structure, the circulations and to offer free accommodation cores. This new offer, more attractive financially allows, in the spirit of the group, to seduce new inhabitants.

3 Experimentation place.

In a fairly similar register, in Switzerland this time, the building of Lignon, built in the 1960s too, has been the subject of special attention in recent years.

Fruit of the design of Georges Addor and Louis Payot, this building of 1065 m long, is the subject since 2004 of a camapagne of restoration. This Genevoise satellite city is classified. The question of the thermal performance of the curtain wall of 125 000 m2 which dresses the facades and shapes the identity is posed. A first study proposes

Fig. 1 , Kleiburg, Amsterdam Galeries in upper floors
(Source: http://www.nlarchitects.nl/slideshow/201/)

the complete replacement of this element by more efficient contemporary systems. In 2008, the TSAM, laboratory of techniques and the safeguard of the modern architecture of the Federal Polytechnic School of Lausanne seizes the subject and develops over three years a project of improvement which is based on "a meticulous weighing of the interests capable of sparing the fields of safeguarding modern heritage and saving energy. "

Four phases of study led to the definition of intervention models associated with detailed specifications to carry out the work.

These four phases are decomposed as follows : "envelope analysis (phase A), determination of possible intervention levels (phase B), development of summary table (phase C), verification of technical feasibility on prototype, elaboration of specifications (phase D) ". (Graf and Marino, 2014)

The study, based on an architectural and energetic diagnosis of the existing, and designed as a "tool" for decision support, offering a vision of the choices available to the owners in a balance between heritage values, energetic aspects that more are included in a temporal program of provisional measures.

4 Heritage recognition.

The study of these two cases highlights the weight represented by the notion of heritage, its impact in the development of strategies for the conservation of the built heritage of the twentieth century.The recognized character of this aspect in both cases allowed a questioning of the strategies initially at work, for one the destruction of one of the last witnesses of a manifest district, for the other the irreversible modification of a a founding element of its identity and technically valiant in its design and implementation.

The urban, architectural and constructive features of the Lignon have also led local authorities to implement a protection scheme called a "site plan".

The international scientific committee of ICOMOS (International COuncil of Monuments and Sites) pointed out in its Madrid document in 2011 the importance of a detailed response to the specific technical issues raised by the twentieth century.

This response intends to integrate, beyond the constitution of a simple inventory, the construction of a culture and dedicated tools.

Culture and tools based on the following articles:
- "Identify and evaluate cultural significance,

– Implement an adequate backup planning methodology,
– Look for technical characteristics of 20th century building heritage,
– Take into account the pressure for change, which is unavoidable,
– Managing change in a dressy way,
– Ensure a respectful approach to additions and interventions, respect the authenticity and integrity of the heritage site,
– Respect sustainable development on the environmental level
– Promoting and celebrating the built heritage of the 20th century in the community."

5 Toulouse's case, a condensate in experimental approach .

At work in its second year, the team of the research program "Toulouse, from the big ensemble to the sustainable city" led by Rémi Papillault, Audrey Courbebaisse, was able to experience, through a public commission, an inspired method of these precedent steps.

Fig. 2 Lignon, Geneve, curtain walls (©Alexandre Mouthon)
http://icomosisc20c.org/sitebuildercontent/sitebuilderfiles/madriddocume
ntenglish.pdf

5.1 Candilis, le Mirail

Four main themes underpin the work of the design team, active within Team X,
– Mobility,
– Function's inter-relation,
– Continuity,
– Identification.

"In his memoirs in 1977 ("Building life"), Candilis will return to this theme of the continuity of research by focusing more particularly on their work on the urban. Thanks to an inversion on the chronology, he manages to explain how each of the extension projects of city could be a stage in the maturation of the group, and how the project of Toulouse-Le Mirail constituted the synthesis. What matters to him is not the historical truth but the construction of a story that makes it more demonstrative. At the urban scale first of all with the development of notions of identity, systems designed with Team Ten and found in 1961 and 1962 in three competitions for satellite cities, Caen, Bilbao and Toulouse. A little later, they draw the restructuring plan of Fort-Lamy in Chad. All these plans include a halftone system whose growth in time and space is done according to a biological model: the city is a tree, the pedestrian street is the trunk on which branches of different extensions branch out. Woods will conceptualize this system in 1960 and 1961 under the term "stem". This synthesis seems even clearer next in terms of the search for qualities for housing. Knowledge develops from 1951 to 1975 around truly innovative theme. The place of the Candilis team in the Team Ten is really based on this knowledge developed on the cell." (Papillault, 2013)

The design of the satellite city of Toulouse le Mirail is of significant significance in the city's history and architecture.

5.2 Beetwen heritage and public urban politic.

However, the last decade of city policies has not spared the neighborhood. Judged socially difficult, a regular place of riots and daily traffics and incivilities of all kinds, the urban renewal guidelines pursue, through a long-term strategy, a policy based on heavy demolitions. The original "Stem" is hardly visible anymore. The continuous tripods which constituted it at its origin are no more than isolated buildings, on a completely re-partitioned ground. On the occasion of the New National Urban Renewal Plan, a series of prefiguration protocols was implemented by the local carriers of these operations. It is in the case of Tourrasse and Tintorets buildings, the social Patrimoine SA Languedocienne who carries the order of this study. Its initial purpose is to be a decision-making tool in the implementation of a strategy of action, which can participate in the national program and its financing but also to include it in a broader plan, timed, wealth management. This prefiguration study, even before the project phase, still sets an orientation on the elaboration of specifications which will be fruit of the arbitrations carried out by the project owner without stopping a project.

Also the study sweeps the history of these buildings, their place in the work of their designers, in the neighborhood, on the social level. It was also deployed, using BIM tools, a digital model of the subject, sort of "exploded" to appreciate all the technical, constructive, actions already undertaken and therefore its degree of integrity. The return of these elements to the client has made it possible to enhance the Tourrasse building and guide future actions towards maintaining it while respecting these singular provisions while providing the necessary normative transition.

6 A better understanding to serve an integrated vision.

These approaches, the possibility of their implementation, and the quality of listening experienced by sponsors and local authorities are fully in line with the objectives of enhancing the potential of 20th century architecture, and more particularly that of inhabiting. Thus, the goals of advancing the knowledge, understanding and meaning of these buildings become real project levers. Their interpretation, their communication contributes fully to their integration in a process of conscious transition, conscious of their cultural significance. The purpose being biensur, in the case of housing the maintenance of the quality of use. The lever that constitutes the concept of heritage, can not, when it is

not heard by all the parties, be enough to lead a project respectful of the stakes it assumes. The phase of the diagnosis, because it must cover all the aspects of the work, in its time, in its technique, its spatiality, its urbanity and its humanity conceals valid supports to a collective and unifying awareness in the projecting.

The passage from Françoise Choay's "museal role to the historical figure" is thus made possible. (Choay, 1996)

Fig. 3. La tourasse, Toulouse le mirail ©Cedric Dupuis

References

Andreu, P. "Faut-il protéger les grands ensembles" "Do Mass Housing have to be protected" in english , In:, Ministere de la culture et de la communication, , 2008, pp. 125. https://doi.org/10.1007/978-2-11-097799-1

Choay, F., "L'allégorie du Patrimoine" "Heritage's allegory", in English , Editions Seuil, Paris, 1996, https://doi.org/10.1007/ 978-2020300230

Graf, F., Marino, G. "Les enveloppes de la cite du lignon à Geneve: enjeux Patrimoniaux et imperatifs energetiques" "Lignon's curtainwalls, heritage matters and energetics impetives" in english , In:, Vanlaethem, F. , Therrien, M.J. "La sauvergade de l'architecture moderne" "Modern architecture safeguard" in english , PUQ.CA, Quebec, 2014, pp. 225–237. https://doi.org/10.1007/978-2-7605-3467-4

Papillault, R., Gruet, S. "Le Mirail: Mémoire d'une ville" "Le Mirail: Memory of a city", in English , Editions Poïesis, Toulouse, 2013, https://doi.org/10.1007/ 978-2917138014

http://icomosisc20c.org/sitebuildercontent/sitebuilderfiles/madriddocumentenglish.pdf

Development of Energy Standards for Housing in the Czech Republic

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Abstract

The article deals with the development of housing stock following the changing energy standard over the years in the territory of today's Czech Republic. The differences in analyzed types of urban structure are outlined on the basis of reference examples from key periods of Czech history. The article is focused on the progression of building technologies of the new residential buildings, which were distinctive for each discussed period after 1945 up to now. The text is focused on the housing quarters from the period of socialist realism of the 1950s, the mass development of prefabricated housing estates (from 1960s to 1980s) and the period after 1989 up until today. The paper follows the trend of building material usage, building envelope structures, the progress of energy performance of buildings and thermal technical requirements over the years. The article states part of the results of a theoretical survey of doctoral research exploring the current state of the housing stock in the Czech Republic.

Keywords

Housing development, energy performance of buildings, building materials, residential locality, Czech Republic

1 Introduction to the Theme

The issues regarding the energy efficiency of buildings and cities have been well discussed in the European and thus Czech environment through the last decades. These issues are often linked to the themes of both economy and ecology. A major impulse for dealing with energy efficiency was the conscious recognition of ending supply of fossil fuels and the global warming. For our environment, the topic of building energy efficiency becomes even more relevant with the amendment with Directive 2018/844 of the European Parliament and of the Council.

The majority of currently inhabited houses was built in the past. The survey conducts the current statement of housing stock not only from the technological aspect but also includes the historical background.

The given themes is only a brief look into the extensive issue. A large amount of today´s houses predate 1945 (mostly 19th and 20th century) and therefore overextend the range of this text.

The aim of the subsequent research is based on the analysis of references and the survey as such to determine the evaluation criteria for the assessing methodology of the energy performance of a locality, i.e. in a scale extending beyond a house.

2 Practical Part and Methodology of Origin Research

The research follows the hypothesis, that the spatial arrangement of the urban development is an essential factor in determining the energy performance of a locality. The research question is defined as follows: Which of analyzed spatial arrangement of localities with predominantly residential function is the most advantageous in terms of the overall energy performance of the locality?
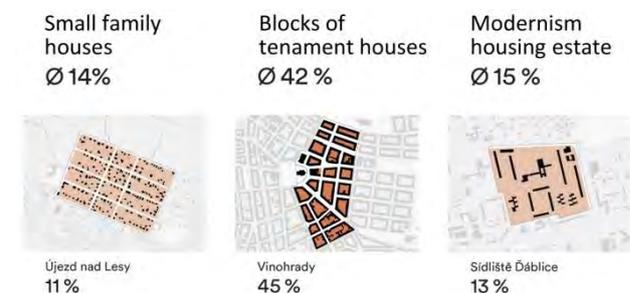

Fig. 1 Built-up area percentage within various urban structures
(Source: Hudeček et al., 2018)

The aim of the practical research is to elaborate a methodology of assessing the energy performance of locality on the basis of the analysis of existing typical housing localities in the Czech Republic differing with urban structures. The gained data will be compared with

available data on particular energy efficient reference localities mostly from abroad.
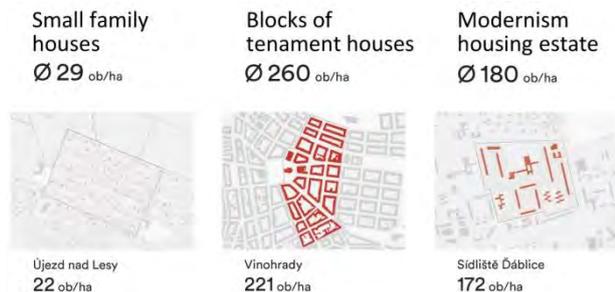

Fig. 2 Population density within various urban structures
(Source: Hudeček et al., 2018)

2.1 Representative Localities: Categories and Criteria

The decisive parameter for the selection of representative assessed localities is their spatial arrangement. The following categories of urban structures are the most commonly used in localities with predominantly residential function: single family houses, terraced houses, semi-detached houses, blocks of flats, modernistic mass housing estates, tenement houses.

The basic characteristics of assessed localities are as follows: similar climatic and natural conditions (temperate climate zone, sites situated between 40 ° and 60 ° N) and appropriate area of each locality (approx. 25-30ha).

The Table 1 shows the main characteristics of assessed localities.

Basic parameters	Parameters defining the energy performance of a locality	
	Site characterics	**Energy needs according to usage**
number of residents		
number of commuters	orientation towards the cardinal points	specific need for water / inhabitant (ha)
population density	geomorphological conditions	specific need for heat / inhabitant (ha)
built-up / undeveloped area	type of soil	specific need for el. energy / inhabitant (ha)
paved/unpaved area	types of energy sources	total built-up volume (m3) according to functional use
public / private area	distance of consumption site (locality) from energy sources	the total energy consumption of the site
prevailing number of floors	prevailing wind direction	

Table 1 Evaluation Parameters
(Source: Falladová, 2019)

The presented theoretical part serves to identify representative localities for assessment. The practical part of research directly follows the results of theoretical survey.

3 Theoretical Survey: Changes in Housing Typology in the Context of Building Technology

The typology of housing has been changed over the years, being linked with the development of building technologies and increasing living standards. The tightening the requirements of building materials and thermal technical requirements has influenced the contemporary housing expression.

3.1 Development after World War II

The breakthrough year of 1948 brought a socialist system in the territory of today's Czech Republic, introducing central housing planning. (Dulla, 2014) At that time, Czechoslovak architecture was influenced by a new architectural direction - socialist realism ("Sorela").

An important aspect of the new construction technology was its lower time demand compared to the traditional technologies. This was linked to the necessity of a fast solution of the lack of housing units after the World War II. (Červenka, 2008)

The structure of the houses was at first made traditionally using brick; sometimes the walls were composed of block-panels, brick blocks or concrete blocks. (Skřivánková et al., 2017) Heating was provided locally whereas the costs of its operation were not initially decisive.

The state was fully orientated towards the industrialization of the building industry after getting rid of the burden of the socialist-realistic historicisms. The historical elements of the Stalinist Sorela were costly and they had to be surrendered. (Dulla, 2014)

Gradually, traditional masonry materials were replaced by full-wall panels and various building materials were used. In the late 1950s and 1960s that were also organic materials, such as straw, diatomite and expanded clay. (Červenka, 2008)

Building technologies in the socialist era were focused on standardization of building elements. (Báčová, 2010) Reducing weight of the building elements was crucial in order to reduce the cost of transportation. Thus, the thickness of the external concrete panels sometimes reached a dimension of only 20 cm. (Dulla, 2014)

In the picture (Fig. 1) is shown an example of time-saving housing estate construction.

Fig. 3 Development of six prefabricated houses G40, 1955
(Source: Skřivánková et al., 2017)

3.2 Mass Prefabricated Housing Estates

In the 1970s, up to 95% of the total new development of residential buildings in the former Czechoslovakia was made up of prefabricated houses. Although the construction time ended in the early 1990s, altogether, nowadays stand about 80.000 prefabricated houses, which contain about 1.160.000 fully functional flats. One third of the Czech population (more than three millions of people) still inhabit this type of housing. (Dulla, 2014)

The large residential complexes realized within the "Complex Housing Development" inherently influenced the current appearance of Czech towns. The flats were equipped with bathrooms, well heated, sun lighted, affordable and mostly built on the outskirts. (Blažková, 2013) The transition to the central heating of water in the newly built residential complexes was also revolutionary.

As the issue of operating building costs increased, the thermal technical requirements for external building structures were defined during the 1960s and 1970s. (Červenka, 2008) That was reflected in the composition of the building structures. In the late 1960s and especially in the 1970s foam plastics, in particular expanded polystyrene, were being increasingly used. In the most widespread types of prefabricated house TO6B expanded polystyrene with a thickness of 10 cm was applied in the early 1990s. (Dulla, 2014)

	1964	1977	1994	2002	2005
Heavyweight External Wall	1,37 - 1,45	0,77 - 0,89	0,46 (0,32)	0, 38 (0,35)	0, 38 (0,35)
Lightweight External Wall			0,41 (0,29)	0,30 (0,20)	0,30 (0,20)
Heavyweight Roof	0,83 - 0,89	0,43 - 0,51	0,32 (0,22)	0,30 (0,20)	0,24 (0,16)
Lightweight Roof	0,83 - 0,89	0,43 - 0,51	0,32 (0,22)	0,24 (0,16)	0,24 (0,16)
Ceiling above Basement	0,93 - 1,11	0,80 - 1,11	0,77 (0,57)	0,60 (0,40)	0,60 (0,40)
New Window			3,7	3,9	1,8 (1,20)	1,7 (1,20)

Table 2 Development of Thermal Technical Requirements
(Source: Červenka, 2008)

The Table 2 shows the heat required transfer coefficients [W / (m2 · K)] whereas recommended values are given in brackets. It shows how the standard thermal

technical requirements have been tightened during the time.

3.3 1990s - The Beginning of the New Era

After the Velvet Revolution (1989), the long decades of unification resulted in the desire for uniqueness of architecture. Along with the expansions of new building technologies very diverse projects were produced and the typology of the family villa became popular. In the second half of the 1990s the outskirts of cities were therefore characterized by considerable suburbanization ("urban sprawl") where houses are deployed regardless of the others. (Blažková, 2013)

Paradoxically, the transition from the typology of prefabricated houses to private villa has deteriorated the operating energy consumption. (Báčová, 2010) Low densities and composition of suburban development brings new problems: expansion of the cities, landscape fragmentation, reduced social interaction, high infrastructure costs, poor transport availability and unavailability of services. (Kohout, 2014)

In terms of the valid standard ČSN 73 0540-2, most of in past decades built houses do not meet requirements for thermal protection. (Báčová, 2010) Complicated construction details with a usage of unproven materials often caused thermal bridges with noticeable heat losses.

Fig. 4 Example of suburban development of family houses near Jesenice
(Source: Hnilička, 2012)

Currently, there are about 1.7 million family houses in the Czech Republic. The distribution of energy consumption in households clearly shows that the majority of energy is consumed for heating (up to 73.4%) by using energy-saving measures the energy consumption of a house could be reduced by up to 90%. (Báčová, 2010)

3.4 Development after the Turn of the Millennium

Energy performance of building (EPB) is a theme that from the year 2002 has significantly influence European architecture. It also leaves its marks on the design, technical solution and the means of using current

buildings. (Kabele, 2019) Since the Czech Republic is a member state of the EU European directives including the energy efficiency of buildings were gradually implemented by the Czech legislative.

Since 2009 state-supported subsidy programs ameliorate the realization of both reconstruction and new construction of houses. The primary intention of the "Zelená usporám"("Green Savings") program, which lays in the reduction of CO_2 emissions carries many accompanying perks. The most common measures include: application of thermal insulation, exchange of windows and heating systems, and utilization of renewable energy sources. (Báčová, 2011)

The idea of "Zelená usporám" is nowadays followed by an analogical program "Nova zelená usporám" ("New Green Savings").

3.5 Current Housing Situation

The current energy standard of buildings follows the 2012/27/EU and 2010/31/EU European parliament and Council directive on energy efficiency, updated in 2018 by directive 2018/844/EU.

According to their requirements new buildings have to be built to the standard of "nearly zero energy buildings". Nevertheless, the main trend of contemporary architecture is to design houses with passive energy standards. Regardless a challenge of the contemporary architecture remains to obtain an optimal expression of additionally insulated facades and the implementation of new technological devices.

In the present day, new residential complexes are built mostly on brown fields, although the development on green fields continues. A search for new housing typology is nevertheless current. Though the ideas of newly built mass housing estates as well as the urban sprawl are gradually superceded, the question of urban quality of such existing localities still remains unsolved.

4 Conclusion

According to theoretical surveys, the current condition of housing stock in the Czech Republic is very diverse. This fact is reflected in the different typologies, spatial arrangement and energy performance of buildings associated among others with construction time.

Ongoing searches are essential for identification of representative localities which will be followed by classification of selected examples to find common indicators to evaluate their energy performance. After the elaboration of a methodology of evaluation of energy performance of locality, the final step of practical

research will be assessment of representative localities in the Czech Republic and comparison of results with reference existing energy efficient quarters.

References

Bačová, M. (2010) "Manuál energeticky úsporné architektury: novostavby, panelové domy, změny staveb, historické objekty" (Manual of energy-efficient architecture: new buildings, prefabricated houses, renovations of buildings, historical buildings), 1st ed., National foundation of natural environment and czech architectonic chamber, Prague, Czech Republic, (in [czech]) ISBN 978-80-904577-1-3.

Blažková, M. "Principy a pravidla územního plánování"(Principles and Rules of Urban Planning), [pdf] Ústav územního rozvoje, Brno, Available at: https://www.uur.cz/images/5-publikacni-cinnost-a-knihovna/internetove-prezentace/principy-a-pravidla-uzemniho-planovani/kapitolaC/C3-2013.pdf[Accessed: 31. 7. 2019].

Červenka, L. (2008) "Obvodové konstrukce panelových budov: poruchy staveb"(External structures of prefabricated houses: construction failures), Grada, Prague, Czech republic, (in [czech]), ISBN 9788024717623.

Dulla, M. (2014) "Kapitoly z historie bydlení "(Chapters from history of housing), 1st ed., Czech technical university, Prague, Czech Republic, (in [czech]), ISBN 978-80-01-05433-8.

Hnilička, P. (2012) "Sídelní kaše: otázky k suburbánní výstavbě kolonií rodinných domů: urbanismus do kapsy"(Urban sprawl: Questions about suburban development of colonies of family houses: urbanism in pocket ", 2nd ed., Host, Brno, Czech Republic, (in [czech]), ISBN 978-80-7294-592-4.

Hudeček, T., Dlouhý, M., Hnilička, P., Leňo Cutáková, L., Leňo, M. (2018)"Hustota a ekonomika měst" (Density and economy of cities), 1st ed., Masarykův ústav vyšších studií, Prague, Czech Republic, (in [czech]) ISBN 978-80-87931-75-2

Kabele, K., "Změna evropské směrnice o energetické náročnosti budov (EPBD 3)"(The change of European Directive about energy performance of buildings (EPBD 3)), tzbinfo, (in [czech]) [online] Available at: https://www.tzb-info.cz/energeticka-narocnost-budov/17969-zmena-evropska-smernice-o-energeticke-narocnosti-budov-epbd-3 [Accessed: 31. 7. 2019]

Kohout, M. (2014) "Můj dům, naše ulice: individuální bydlení a jeho koordinovaná výstavba "(My house, our street: individual living and its coordinated development), 1st ed., Zlatý řez, Prague, Czech Republic, (in [czech]), ISBN 978-80-87068-11-3.

Skřivánková, L., Švácha, R., Koukalová, M., Novotná, E. (2017)"Paneláci" (Prefabricated houses), 1st ed., Art and industrial museum, Prague, Czech Republic, (in [czech]) ISBN 978-80-7101-169-9.

How to Create a Communist Housing System from Scratch? The Case of Varna in Bulgaria

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Abstract

Bulgaria has faced a serious housing crisis since the collapse of the communist regime in 1989. The country is struggling with a decreasing population, high poverty and a lack of efficient urban renovation programs, even if more than 80% of the Bulgarians own an apartment. However, the communist architectural and urban heritage still continue to stand in the postcommunist landscapes. Unfortunately, despite its overwhelming presence, it is yet still poorly documented and public authorities are dealing with a lack of data and orientations regarding the preservation of these heritages.

Facing this situation, how can the understanding of Bulgarian communist architecture, from its conception to construction and appropriation, help us to develop a new approach on how to reconnect these heritages with contemporary urbanism and sustainable development?

Our intervention will focus on the origins of communist housing in Bulgaria, from 1945 to 1989 and its planning system. It will highlight the designed spaces, evolutions, in order to understand the planning of Bulgarian cities during the second half of 20th century and the way in which the Bulgarian Communist Party foresaw the country's modernization.

Keywords

Communist housing, Bulgaria, Urban Renewal

Introduction

Bulgaria has faced a serious housing crisis since the collapse of the communist regime in 1989. The country is struggling with a decreasing population, high poverty and a lack of efficient urban renovation programs, even if more than 80% of the Bulgarians own an apartment. However, the communist architectural and urban heritage still continue to stand in the postcommunist landscapes. Unfortunately, despite its overwhelming presence, it is yet still poorly documented and public authorities are dealing with a lack of data and orientations regarding the preservation of these heritages, still inhabited and preserved by their owners.

Facing this situation, how can the understanding of Bulgarian communist architecture, from its conception to construction and appropriation, help us to develop a new approach on how to reconnect these heritages with contemporary urbanism and sustainable development?

The methodology used for this research is based on two main works. Due to the lack of documents concerning the typologies of panel housing in Bulgaria, we reconstructed the evolution of mass housing in Bulgaria with a field research in Varna and a redrawing work of the nomenclatures used during this period. Several nomenclatures were found in the headquarters of Veolia Energy Varna while the missing ones were reconstructed using field surveys. In parallel, we gathered the forgotten GenPlans and several sources on the communist housing system in order to bring a new light upon the urbanization of communist Bulgaria, especially in Varna. Creating a database of mass housing and their evolution during the communist regime helped us to understand their history and to draw guidelines to their future renovation.

Towards a new housing system : from Plan to details

Right after the Second World War, Bulgaria is facing a serious urban crisis : defeated and ruined, the country is occupied by the Red Army and the Patriotic Front, which implement a totalitarian regime based on an imitation of the USSR's model (with few modifications due to the national context). The country, fully stabilized, engage a large reform of the urban development by implanting a new Constitution and new policies in order to fulfill the five-year plan :

A large reform of the territorial division, with extreme power centralization

The collectivization of land with massive expropriations in the agricultural county and a fast industrialization of urban outskirts areas

A wholescale reform of the settlement policy: citizens aren't free to choose where to settle, they are a resource allocated according to the need of the industry.

The creation of new institutes and offices owned by the State tasked with the objective of creating new architectural and urban forms for the communist way of life.

The principal consequence of that politic was a demographic explosion in the main urbanized areas like Sofia, Plovdiv or Varna. Seeing that the overcrowded apartments, the former cooperative system and the slums cannot be a long-term solution, the city councils in Bulgaria faced a really complicated situation.

Following the death of Stalin, the Eastern Bloc made a drastic change in their urban development. The rise of Nikita Khrouchtchev in USSR and Todor Zhivkov in Bulgaria drew the new guidelines for urban planning and the modernization of the housing system. During the constructors' conference in 1954 December 7th, the new leader of the USSR announced the main challenges for the next decades in architecture and urban planning for the Eastern Bloc: Create a construction sector based on an heavy industrialization to build fast and cheap ; define a catalog of building typologies, relying on the standardization to cover the entire territory ; desolve the housing crisis by multiplying the number of housing

Lacking the tools and the industrial sector to fully develop a new housing system, architects and engineers where asked to regroup in three types of state-owned design offices: the industrial offices (working for an industrial conglomerate), the town design studios (like Sofproekt for Sofia) and the special design offices (like Glavproekt for the most important projects).

During the communist regime, there is only three types of actors in the command: the State, with its different organizations; the State-owned enterprises; the construction cooperatives. The private activity was only allowed by the Bulgarian Union of Architects during the free time for several selected people. In this system, there is no lack of projects, but a lack of good projects. During this period, the competition between architects was mainly directed inside the different offices to obtain the best projects possible.

After 1954, the Communist Party asked the Sofproekt, the Glavproekt and the Institute of Standardization and Construction Industrialization to fully develop a full team to design and construct the first standardized dwellings with concrete panels. The first prototypes were built in Sofia and Rousse between 1956 and 1960.

Nomenclatures, containing all the documents with the standardized projects, were transmitted to the local sections of the different design offices. The industrialization of the construction system in Bulgaria is a slow process, even if the regime was speeding it up at forced walk. As a result, before the 70's, 84% of the buildings were always constructed by private cooperatives, with two or three floors maximum. After 1970, the State decided to heavily finance the modernization of the Bulgarian housing system by ordering the creation of new gilorayons in the most industrialized cities (Sofia, Plovdiv, Varna, Bourgas, Rousse, …). The urban landscape changed completely: the former cooperative housing was quickly replaced by concrete building over 9 floors outside the limit of the ancient city. By the end of the 80's, 30 factories were producing the concrete panels for the urbanization of the entire country: a total of 120 gilorayons were created during the communist regime.

The revolution of the housing system, which transform from a brick and stone construction to concrete panels, is consolidated in 1973 by the new law on the urban planning. This law adopts the principles of a national scale for urban development. As a result, the different planning documents had to be harmonized with a new Scheme of National Spatial Planning and be in accordance to the five-years plan. In 1977, the KNIPITUGA, the research institute for urban planning is tasked by the government to create a new system to organize and develop the national territory. They published in 1977 the new system of national planning. This schema provided the new guidelines for the territories' development, especially along the Danube, the Black Sea's coast and the largest cities in Bulgaria.

The communist system for the housing sector is implemented not only in the construction and design process, but also in the attribution of dwellings. Due to the political system, citizens didn't have the choice to live wherever they want. If their employers didn't provide some flats of their own housing stock, they needed to apply on an official list organized by the municipality. In order to access the private property of a flat, citizens were asked to provide their own funds to obtain the right to be on the list and a bank loan with low interests to finance the construction. The delays were exceptionally long, especially for those who weren't involved in the local communist activities (from 5 years to 30 years). Due to the fact the most of the apartments created where delivered with missing parts (no ventilation, lack of windows, …), the future inhabitants were forced to make the last work by themselves.

The communist housing system set in place during the second half of the 20th century is totally controlled by the State and the main objectives of the fifth-years plan. Nevertheless, this system had fatal flaws. The lack of private initiative had created a passive system, only driven by the State. As a result, innovations were only state-induced and the entire system was fragilized by the lack of financial support and will to improve the quality of urban and architectural planning. It also lacked in flexibility, forcing the different actors to wait until the State made any decisions regarding urban planning. The situation slightly improved in 1986, when the communist regime authorized the private investors to construct individual houses in the suburbs, but this reform intervened to late to be very effective and palliate the flaws of this system.

The communist housing system in Varna

To the contrary of Sofia, Varna is a coastal city which hasn't been destroyed during the war, but is subject to a large process of urbanization in order to create a industrial and leisure territory on the Black Sea's coast. Right after the war, Varna is facing a demographic boom impossible to handle at this time: from 80 140 inhabitants, the city will grow to 472 654 inhabitants today.

In order to reinforce the urban development, Varna structured the housing and public works sector, according to the new system of hierarchical urban planning and architectural design. In 1948, the own Council is tasked to structure the so-called reconstruction of Varna. For this purpose, they use all the remaining local associations and firms to gather materials and equipments. They create "TPK Varna", a state-owned enterprise which operate as an industrial conglomerate in Varna, with a special R&D division. Inside TPK Varna, 4 divisions are created after 1976: residential constructions, culture and social constructions, leisure constructions and industrial equipments.

This division is mainly composed with engineers and architects and is one of the principal design offices in Varna during communism. It pairs with TPO Varna, the official design office working with the municipality in order to create the main structure of communist urban and architectural development in Varna. They are supervised in Sofia by the Glavproekt, in charge of the most important projects in Bulgaria, so the Ministry can always have an eye on their production.

There is also a public company in charge of the public space. This company "Ingstroï" has been created in 1971 and has been divided in 4 sections (one per sector) in 1980. One public investor "Capital Construction" and private investors, under the form of cooperatives, are in
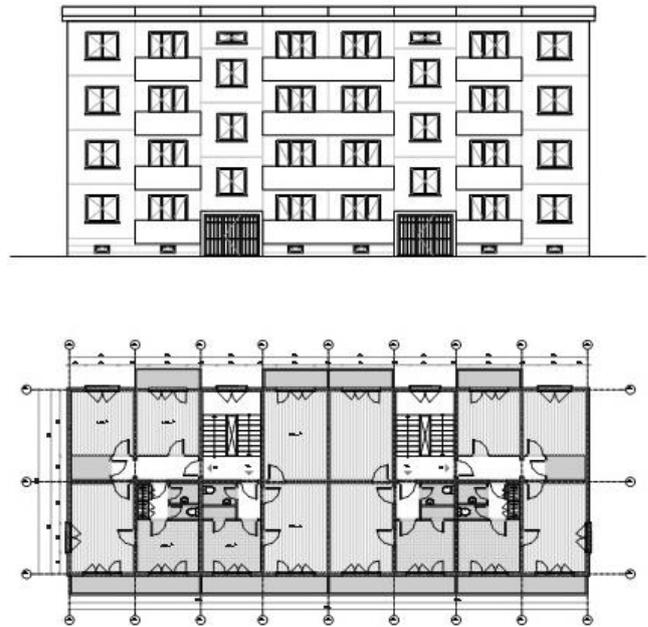

Figure 1. First type of panel housing developped in Varna (Source : Florian Faurisson)

charge of financing the different construction projects in Varna. Unfortunately, the lacked of workforce led the different investors to employ low-skilled workers, especially from the so-called "volunteer brigades" (there weren't really volunteers…).

Those actors defined the way urbanism and architecture were built from 1944 to 1989. Nevertheless, this system faced a fundamental problem. It relied heavily on the validation of the Genplans, the former Masterplans during the communist era. Those plans, created by TPO Varna and the Glavproekt needed to be validated by the Council of Ministers at the highest State-level before being implemented on the local level and provide guidelines for urbanization. In Varna, the first plan, created by Yaremov during the 50's became obsolete less than 10 years after its validation. The same problem can be found during the conception and the approval of the Boïtchev's plan. This GenPlan was designed in 1972 but due to political decisions was delayed until 1983. The desynchronization between the GenPlan's approval and the daily needs of the city leads to an interesting way of urbanizing the city. Even if the plan is not approved by the authorities in Sofia, TPO Varna's architects needs to has guidelines in order to urbanize the city. Therefore, they'll follow unofficially the unapproved GenPlan and prepare detailed plans for each gilorayons in order to structure the urban development until the GenPlan's approval.

This dissociation between the State and the local powers is what structured the urban development in Varna during the second half of the 20th century. Even if the State in Sofia tried to control the urbanization of Varna, the daily
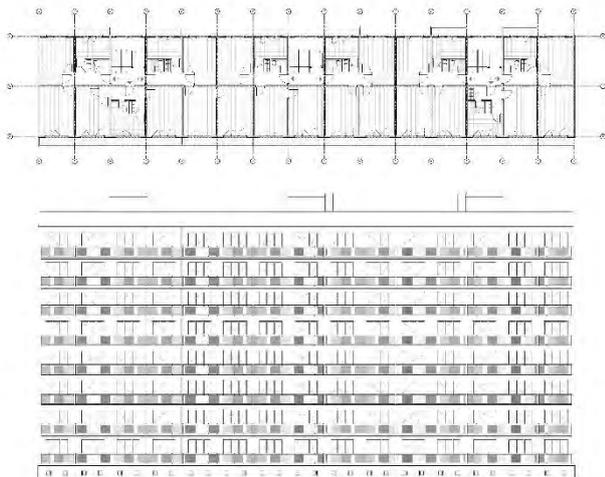
Figure 2. Panel housing from the nomenclature Бн- VIII - Рс/Вн used in Chaïka district (Source : Florian Faurisson)

need for housing needed to be resolve even if the official approval was lacking.

The modernization of the housing system is closely followed by the modernization of architecture itself. Before the 60's, Varna's architecture was made with bricks and stones. Due to the standardization of architecture during the 60's, several attempts were made by the local architects to create a prefabricated architecture based on the typologies produced in Sofia and Rousse. The first prefabricated housing building ever created in Varna was the residential building of Omourtag street, three storeys building constructed in 1960. Based on this experience and the blueprints delivered by the State, Varna developed a series of nomenclatures for its housing design : Бн- VIII - Рс/Вн (1965-1975) ; Бн - V - VIII - Вн (1972-1981) ; БП 79 - Вн (1981-1986) ; БП 87 - Вн (1987-1989) ; БП 88 - Вн (1988-1989). Those nomenclatures were the most used ones during the gilorayons' period. They permitted the creation of more than 939 buildings in Varna, with various shapes and forms. With the previous construction system, the typology's evolution in Varna during communism can be reconstructed in generations.

The first generation (1944-1956) is made of cooperative housings, usually low-rise buildings (3 floors maximum) with a realist socialist aesthetic. The second generation (1956-1965) is made with small residential buildings with a modern aesthetic. Some of them are totally experimental and constructed with new technologies implanted after the modernization of the industrial sector (like the Omourtag experiment). Those experiments are led with the constant support of the cooperative sectors, which provides new dwellings until the modernization of the housing construction became fully operational. The third generation (1965-1981) provided high-rise residential buildings (9 floors), constructed with concrete panels

mainly based on the pre-existing technology developed in western Europe during the Reconstruction and the creation of the Grands Ensembles. The fourth generation (1981-1989) provided high-rise residential buildings (9 floors or more), constructed with a new type of concrete panels which authorized new types of combinations on the façades but also on the staircases themselves. The last generation also used the 3D concrete panels on several experimental projects (like the Red Square building).

The fall of communism in 1989 put a definitive stop to the modernization of communist housing in Varna. Even if most of the masterplans for the gilorayons were incomplete, at least 1000 buildings were created to support the increasing population in Varna.

Conclusion

Unfortunately, even if this modernity still exists in Varna's urban landscape, the lack of urban policy at the municipal level for the renovation of these buildings make them slowly decay. In Bulgaria, urban renewal is mainly supported by the European Union and the Ministry of Regional Development and Public Works. This policy and the fact that 90% of the population is owning an apartment made the urban renewal process very difficult in Bulgaria. Moreover, the lack of understanding of the history of urban planning and architectural communist design in the country made it very difficult to develop another approach of renovation. In Bulgaria, renovation is only a energy and structural efficiency project: communist housing and their surroundings are not considered as a support to develop new projects at imbricated scales, but only as objects to repair. We think that improving our knowledge on both the construction process and the design process of these dwellings will lead Bulgaria on a better approach of urban renewal especially with a patrimonial approach.

References

CARTER F. "Housing policy in Bulgaria". In SILLINCE J. eds. *Housing Policies in Eastern Europe and the Soviet Union*, Routledge, London, 1990, Pp170-227

НИКИФОРОВ и., градоустройството в българия през ХХ и ХХИ век в контекста на европейското, славена, София , 2016 [NIKIFOROV I., Urban planning in Bulgaria in 20th and 21st century in the context of European urban planning, Slavena, Sofia, Bulgaria, 2016]

PARUSHEVA D., MARCHEVA I., "Housing in Socialist Bulgaria: Appropriating Tradition", *Home Cultures*, Volume 7, N°2, 2010, Pp197–215

ПЕТКОВ Н., & КАЦАРСКИ Г., ВАРНА архитектура и строителство : 1944–1990, Сиела, София, 2018 [PETKOV N., KATCHARSKI G., Varna : Architecture et Construction : 1944-1990, Ciela, Sofia, Bulgaria, 2018]

TSENKOVA S., "The Legacy of Socialist Housing Systems", In TSENKOVA S. eds, *Housing policy reforms in post socialist Europe*, Physica-Verlag HD, Heidelberg, 2009, Pp25-49

The Evolution of the Microdistrict Idea as the Main Form Planning of Mass Housing in Russia: From Tradition to Newest Demands

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Abstract

The objective of this research is to explore basic transformation points from traditional planning of "Microdistrict" (Soviet Period) to the newest demands (Post-soviet Period), with a focus on the Siberian city - Krasnoyarsk. The paper presents a retrospective view on the development of a 'micro-district' social-planning conception in the XX century with several periods: densification of historic quarters to large quarters; socialist mass housing construction; multi-story prefabricated mass housing construction; post-socialist development; the period of modern microdistrict projects and rethinking of it.
The article provides theoretical grounds for the tendencies of residential environment transformation by the beginning of the XXI century.

Keywords

residential planning units, microdistrict, urban planning

1.   Introduction

Since the second half of the 20th century in Russia residential areas are formed according to the social planning framework called "Microdistrict". Microdistricts were assumed as self-sufficient city planning units, inseparable by the nature of their general structure, and morphologically identical. The self-sufficiency and viability of their structure is reinforced by the presence of planning boundaries, social institutions in the form of schools, kindergartens, and a public core – market or square, as well as division into lower-order entities – residential groups. The concept of the Soviet microdistrict was adopted in the CIS countries, the USSR, and also in a number of CMEA countries, and China. In the early 21 century, the post-Soviet microdistrict witnessed the emergence of change in the functional characteristics of residential buildings. Attitudes towards the environmental quality of the living environment change, ideas about private and public interests change as well. Yet, microdistrict retains its role as an object of social guarantees (Fig.1).
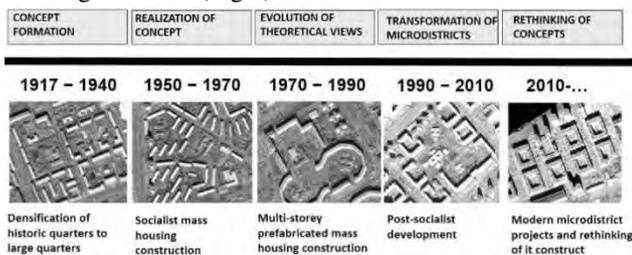

Fig. 1. The evolution of the microdistrict idea as the main form planning of mass housing in Russia (Source: author is Fedchenko Irina)

2.   Period of densification of historic quarters to large quarters

At the beginning of the XX century, a period of urbanization process development in the USSR, the problem of safe and comfortable urban life organization was urgent. The idea of humane residential environment at that period was close to the idea of "survival" – that is the population's deliverance from insanitary urban residential conditions for working people. That led to a historical quarter extension due to the inclusion of social and everyday service objects. Thus, new functions and objects non-peculiar to a quarter structure such as educational, public catering, trade and public space institutions, sports areas and quarter kindergartens were introduced to extended city quarters.

In Krasnoyarsk, a search is under way for the rational organization of the city. Large quarters are being built near industry with several principles:

- Inclusion of kindergartens to the residential group
- The school was located between blocks
- The traffic system was built on the basis of excluding the internal transit traffic and ensuring the safe organization of the pedestrian walkways of children to children institutions.

3. Socialist mass housing construction period

After the Great Patriotic War it was vital to provide a high percentage of the population with individual flats in the shortest period of time. So, the concept "demand" became the main one. At that time the humaneness of the environment was understood as equality in demand satisfaction and reduction of "waiting for one's own flat effect". They began searching for more efficient residential formation in urban construction satisfying the population's demands in guaranteed socially important objects within physically accessible boundaries.

"Micro-district" planning conception was implemented as an alternative to a "quarter" structure of an industrial city with follow principles:

- the housing and facilities should be integrated;
- the through traffic should be discouraged;
- the green space should be created in "microdistrict garden" (in percent for each resident);
- the residential grouping should be determined by the 'service radii', the optimum distances between housing and services;
- the optimum numbers of community facilities should be based on the number of residents they served (Fig.2).

Fig. 2. Microdistrict "Zelenaya Roshcha". Krasnoyarsk. 1960-2019 (Source: archive "Krasnoyarskgrazhdanproekt")

4. The period of multi-story prefabricated mass housing construction

At the end of the 1970-80-s the growth of construction industry capacities intensified again in Soviet architecture:

- Development of methods for improving the rationality of urban development of territories
- Functional hierarchy of services
- Orientation to mass consumers
- Development of a regulatory framework
- Development of an interdisciplinary approach to planning

A significant increase in the number of storeys led to the loss of a 'human' scale, space-and-meaningful residential environment structures destruction. The architectural science was undoubtedly conscious of the problem of house building aggressiveness with its monochromatic and monotonous nature and the problem of social contacts but nothing was overcome in practice. A special attention was given to improvement of industrial habitation typification methodology and planning composition of residential environment. The idea of a micro-district gave rise to the criticism against social life imperfection, inability to reflect the complexity of social, economic and technical problems causing unsatisfactory sanitary and hygienic conditions, transport difficulties, substantial waste of time, people's dissociation at extraordinary dull site development.

The huge part of the housing areas of Krasnoyarsk consist of "Microdistricts' of multi-story prefabricated mass housing construction.

The comparative analysis of projects microdistrict from archive "Krasnoyarskgrazhdanproekt" with their implementation shows that the implementation of microdistrict Mass Housing corresponds to their projects. Experimental microdistrict of multi-storey prefabricated mass housing "Solnechny " including the territory of residential group of multi-story prefabricated mass housing construction, school, kindergarten, number of services.

5. Critical rethinking of the Theoretical Concepts of Microdistrict in the Late XX Century

Analysis and systematization of domestic and foreign theoretical studies in the field of urban planning of microdistricts enabled the identification and summation of the scholarly criticism that had developed by the 20th century:

- Aggressiveness of residential development with a dominant monochromacy, monotony, and hypertrophy of open spaces (G. Z. Kaganov, B. R. Rubanenko, N. M. Trubnikova)
- The rigidity of the functional zoning scheme (E. Gutnov A. Baburov, A. E. Gutnov, G. Dumenton, Lezhava, S. Sadovsky, Z. Kharitonova)
- The consistency between industrial methods of mass construction and ecology planning (E. M.

Mikulinva, B.T. Tobilevich, V.I. Gutsalenko, A. G. Bolshakov, I. V. Kukina)

- The lack of participation of future residents in the process of planning (E. Gutnova, B. A. Portnova, K. V. Kiyanenko)

At the end of the twentieth century, a search for new concepts and experimental solutions, new standards and rules for the formation of neighborhoods are being developed.

6. Post-socialist development period

The change was due to commencement of unforeseen processes throughout residential areas: dissolution of a layer-based service system and the formation of professional activity, social activity, and the use of territories that were uncharacteristic for residential environment. The filed survey revealed that the functioning of the minimalist spatial structure of microdistricts led to the development of unanticipated functions: small and medium-sized trading enterprises and service firms. The microdistrict became a multifunctional organism, independent of large-scale industrial objects.

Transformation of the morphological structure of "Microdistrict" is in following:

- Functional transformation of existing microdistrict;
- Changes in Spatial and Planning Characteristics of Microdistricts;
- Changes in Private and Public Relations within Residential Areas.

Functional transformation of existing microdistricts.

From the late 20th century, market concretion in the open spaces led to the formation of commercially active streets along pedestrian paths.

Later, there were changes in the territory use around commercially active zones and the expansion of the architectural typology of residential buildings due to the occupation of the first floors of residential buildings by small and medium-sized business.

Changes in Spatial and Planning Characteristics of Microdistricts

The microdistrict became a multifunctional organism, independent of large-scale industrial objects. There formed a mixed multi-functionality of the living environment, where the lower floors of a residential building were considered as a structural value-adding segment of social, economic, and functional relations. There is a transformation of the morphological structure

Fig.3. Microdistrict "Solnechny". Krasnoyarsk. 1960-2019 (Source: author is Fedchenko Irina)

of the plan, compaction of buildings, a combination of various archetypes of housing.

Changes in Private and Public Relations within Residential Areas

Changes in private and public relations in residential areas became fundamentally important for the microdistrict transformation in the post-Soviet space due to verious types of landowning and land use. Since the introduction of the Town Planning Code of the Russian Federation, urban areas are subjected to compulsory surveying and after that put up to the city auction.

According to the on-site servey of Russian microdistricts, a patchwork demarcation of territories on a property basis into private ownership spaces (groups of residential buildings, less commonly quarters) and public spaces takes place in the residential environment. The problem is that in the result we got fragmented microdistrict environment: in architecture, in plan and in reality. Thus, for instance, in the plan of the Innokentievsky microdistrict in Krasnoyarsk, according to the land survey plan, the territory of the microdistrict is divided into residential areas, a large multifunctional complex, territories of two office centers, of a church, hospital and a number of utility facilities (Fig.3).

7. The period of modern microdistrict projects and rethinking of it construct

At the beginning of the 21st century, a new period of mass construction of residential areas in Russia is developing with follow principles:

- Living environment as an object of city regulation
- The territorial policy of boundary surveying and self-governance

- The introduction of public-private partnership to the process of formation and management of development
- Provision of conditions for continuous and diverse development
- Saving of social guarantees (schools, kindergartens)
- Formation of aggressive high-density residential environment

Since the early 21 century, there has been an increase in the number of scientific articles and projects that sought for ideas of combining discontinued and perimeter forms of the post-Soviet microdistrict:

- The integrated type "microdistrict quarter". There occurs a densification of development, the formation of fine-meshed planning structure consisting of residential groups of different configurations, such as in the microdistrict "Novoostrovsky" in Krasnoyarsk (Fig.4).

- "Discontinuous type" of combining various morphological types of development within the microdistrict plan.

Fig.4. Microdistrict "Novoostrovsky". Krasnoyarsk. 1960-2019
(Source: author is Fedchenko Irina)

Conclusion

The evolution of the microdistrict idea as the main form planning of mass housing in Russia shows that in the post-soviet space, the microdistrict changes its original concept.

From the moment of transition to a market economy the spatial organization of a microdistrict becomes more varied, but has a chaotic development and loses an integrated approach and rationality of planning. Availability, service and a choice of functions increase, but there are no regulations constraining business

development in a microdistrict. Today, democratization of development of a microdistrict increases. The inhabited environment has got real inhabitants, with their requirements and preferences. There are local governments.

At the beginning of the twenty-first century the idea of the microdistrict as indivisible habitats of social guarants, safe living, social environment of continuous human development, and mostly pedestrian, green space is still timely.

References

Kosenkova, Yu.L "Urban Design Thinking of the Soviet Epoch: Search for Stable Structures", Academia, vol. 2, pp. 12-15, 2008.

Engel, B. (2007) Public space in the "blue cities" of Russia. The post-socialist city: Urban form and space transformations in Central and Eastern Europe after Socialism, 285-300

Fedchenko, I.G. Planned Residential Units: New Development Trajectories [Электронный ресурс] / I.G.Fedchenko // AIP Conference Proceedings: YOUTH, SCIENCE, SOLUTIONS: IDEAS AND PROSPECTS (YSSIP-2016): Proceedings of the III International Young Researchers Conference "Youth, Science, Solutions: Ideas and Prospects" – 2017. - (Vol.1800).– Режим доступа: http://aip.scitation.org/doi/pdf/10.1063/1.4973073

Krainyaya, N.P. 'To the Search of Sociality in Urban Building Formation', Academia 2, 73-76 (2009).

Kiyanenko, K.V. "Entering the Industrialization River 2: Search for Alternatives to Mass Houses Building', Architectural Bulletin 1 (106), 45-49 (2009).

Kukina, I.V. "Elementary Planning Residential Formations", Housing Construction 8, 26-29 (2005).

Kukina, I.V. , I.G. Posdniakova, "Development of Scientific Conceptions of Elementary Residential Forms at the End of the XX Century and Beginning of the XXI Century", Housing Construction 11, 42-48 (2010).

Mass Housing Areas Revitalization: Public Activity Aspects

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Abstract

From the early 1960s until now thousands of Ukrainians reside in prefabricated housing complexes. During these years, the perception of socialist neighborhoods have changed from adored modern life symbols to gloomy ghetto-like areas and again to a livable space with great potential. Today, mass housing is getting a second wind, thanks to the ambitious projects of its residents and professionals seeking to preserve unique structures and housing stock with established lifestyle, but at the same time fighting for survival against developers who are trying to compact areas to the detriment of the comfort of local residents. The revitalization movement has not yet received fair state support, and the municipal planning system remains inflexible. The realization of the project depends on how effective the local community can act. This paper evaluates the success of three spatial transformations performed by micro-communities and a nature of their interaction with other subjects of the urban development process.

Keywords

Mass housing, public activity, participatory planning

1. Housing in the Ukrainian Union Republic

Rapid post-war industrialization in the former Ukrainian Soviet Socialist Republic has changed the way in which millions of Ukrainians perceive their living environment. Industrial regions required economy, quick and equal housing decisions for their workers. The developing construction brunch satisfied this demand with an ambitious experiment by implementing standardized prefabricated neighborhoods: simple, cheap and modest. Prefabricated multistory houses, as an alternative to the traditional brick ones, took the center stage in Soviet housing.

Giant dormitory districts and cities of Cheryomushki and Tairovo (1960s) - port workers districts in Odessa, engineering industry worker's district Saltivka in Kharkiv (1970-1990s) the industrial satellite district Troyeschina in Kyiv (late 1980s), Pripyat (1970), Yuzhnoukrainsk (1975), Slavutich (1986) - satellite cities of Nuclear Power Plants, - these are only a small part of the districts which almost completely consisted of prefabricated buildings and accumulated a great amount of population. Unluckily the planners did not concentrate much on the aesthetic side and infrastructure of the new districts, adding unique visual features only to buildings with special status (e.g. registry office, Palaces of the Pioneers,

cinemas). That was the result of another political line – the so-called "fight against architectural extravagances" and coming back to modernist simplicity. The gigantism of new monotonous residential districts caused an enormous visual contrast to the human-scale old districts and defined the completely new image of the "modern Soviet city". Due to standardization and optimization, a large amount of urban development remained monotonous and estrange. As a result of this policy, the country possesses huge areas of socialist mass housing, which inhabitants could hardly associate themselves with the territories. Many residents want to change the appearance of their micro-districts, but they do not know where to start.

2. Transformation preconditions

Currently, housing and land ownership in Ukrainian mass housing areas remain a paradox: the apartment privatization rate equals 98%, but at the same time, buildings and land plots belong to the municipality. The bodies of self-government, which finance the capital repair of the housing stock, fund only 8-10% of needed cost amount, not able to concentrate appropriate expenditures on housing reconstruction in local budgets. (Oliynyk 2009) This means that other actors need to be attracted to improve the situation. In the early 2000s, the

government began a new reformation stage, aiming to ease the burden of mass housing areas maintenance. The term "*Association of Co-Owners of Multi-Apartment Building*" appeared in 2001 aiming to create independent bodies for housing management. From 2015, the idea of transferring managerial rights over the territories of districts to associations of tenants is actively developing. Strengthening local communities is the new goal declared in the Decentralization Law of 2015 - attempt to bring territory management closer to the European model. This step was a prerequisite for development and partnership with the European Union, as declared in the direction of the country's development. However, urban and spatial planning, public policy tools continue the legacy of the past and have yet to be fully utilized in supporting economic growth and managing decline across the urban space. (Restrepo Cadavid and Quintero E. 2015) Complex transformation requires transparent and detailed plans, complete documentation and flexibility that cities' planning offices are not yet ready to provide. Therefore, "revitalization" often means self-initiated projects by activists and residents falling under the definition of participatory planning.

3. Participatory planning and revitalization

Participatory planning remains mostly unknown in Ukraine, where development is traditionally "beamed down", and the population is not having much interest in urban transformation, preferring the role of onlooker rather than an actor. However, in rare cases, protest movements or outside support stimulate small-scale local activism.

To fall within the framework of participatory planning laid down by Robert Chambers (PRA - Participatory Reflection and Action) revitalization actions should fulfill the following criteria: the expert´s role narrowed to facilitating of participants to do own study and elaborate own approaches; a focus on cumulative learning by all the participants; experience transfer and knowledge exchange through various media. (Fisher 2001) Further, some illustrative examples are collected.

3.1 Revitalization in Cheryomushki - Odessa

The project "Let's design a yard in Cheryomushki" has become part of the "*Changing Places*" program implemented under the "*Leipzig Prize for Integrated Development in Ukraine*", that took place in a mass housing district "*Cheryomushki*" in Odessa. A non-governmental, public educational platform "*Impact Hub

Odessa*" initiated improvement of the public yard in Cheryomushki district. In February 2017, in partnership with the City Club "Odessa: Strategy-2050" and the Association of AIDO "*Development of Self-Government*" Impact Hub arranged a workshop. (Mayak, 2018) The event united the community with professionals from Odessa State Academy of Civil Engineering and Architecture (OSACEA). Professionals and local inhabitants took part in the reorganization of the yard space, surrounded by typical buildings. The approved project was based on strict zoning to separate the public territory from the parking with the help of various elements and greenery. Noteworthy is the fact that initially, several associations of tenants fought for the right to use the grant money, but in the end, only the one that agreed to include the improved structures in the asset list remained. The whole transformation took around 6 months. Since the territory of the yard belongs to the tenants' association, municipal services were excluded from the process. Further work on improvement and keeping the yard space has to be conducted by the tenants as well.
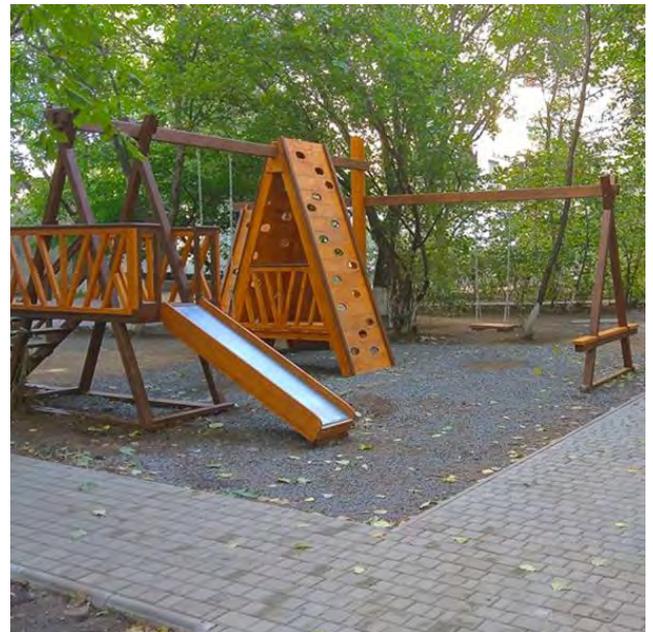
Fig. 1 Detail of the newly transformed yard space on Varnenskaya street, Cheryomushki, Odessa (Source: Maria Smirnova)

The mission of this pilot project was to create a precedent of cumulative learning and experience sharing - to go independently through all stages of the redesign process, and to develop methodological instructions for those who wish to repeat the similar experience in their yard. The booklet, published by the project organization team describes all stages of the project in the form of a

systematic tutorial. (Smirnova M., et al. 2018) Until the end of 2019, the co-owner associations are going to continue work on their territory and consult their neighbours.

The success of future transformations depends on whether the financial and administrative responsibility will be effectively shared between the newly created residents' organizations and the response of municipal bodies.

3.2 Neighbor's festival in Saltivka – Kharkiv

This project which started as an experiment in the framework of a Master's thesis, developed into a live initiative, and united young architects with the local community. The active phase took place in the mass housing settlement of Saltivka, Kharkiv in September 2015. The organizers declared the action as a way to combat the monotony of neighborhoods and create a point of attraction for the community, reviving the old focal point – an open-air stage in the micro-district #524. Heinrich-Boell-Foundation Ukraine provided financial support and the project received additional approval from city's authorities. The project viewed as a catalyst for uniting local communities and their future development (Sergatskova, 2015). In order to achieve this result, architects Vasylysa Shchogoleva and Bohdan Volynskyi organized three weekends-long "Neighbors' festival" to promote their ideas and to stimulate inhabitants to take part in the transformation of their living environment.
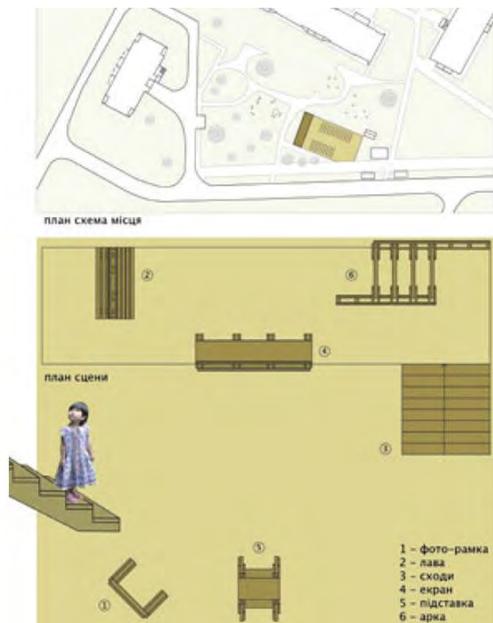

Fig. 2 The site of "Neighborhood Festival", visualization (Source: Vasylysa Shchogoleva, Mikrorayon Future project)

During this time, people were invited to take part in the construction, attend various workshops and lectures on community development. Local children and youth took

an active part in the transformation, brainstorming, and cultural events. Teaching and experience exchange should have provoked further independent transformations. The renovation of an old open-air area, bringing the function of "parley stage" and following events (a concert, movie screening, and workshops) foreseen as a start of development in the entire area as a universal approach. The disadvantage of the project was the lack of prognosis for further changes and their formal character. The development of space together with the residents had a positive effect, but further use remained ill-conceived. Despite the fact that the action was successfully completed, it did not receive an extension, as it had not acquired further administrative and community support.

Fig. 3 Realized community space (Source: Joe Plommer, Mikrorayon Future project)

3.3 Transformation in Sychiv - Lviv

A successful democratic planning initiative started as a protest against the developers of public space, which began in the Lviv mass housing area of Sychiv in 2014. The conflict received prolongation as a legal argument and the arrangement of the existing square and the discussion of how this space should be used in the future. The inhabitants created the NGO "*Better Sykhiv*" and began to co-operate with the authorities on the issues of the arrangement of the square. Eventually, the square was returned to community property and re-arranged into a leisure area for all generations with benches, trees, barrier-free pavement and sculpture of the Lady Mary. (Better Sychiv 2017) With the time, the NGO from a small group of active citizens grew into an organization with a wide net of connections including the municipality, public organizations, and schools. The NGO continued

the work with the population in terms of education projects and urban transformation. The Square of Dignity turned into a crowd-funded project that continues receiving new elements and greenery. Finance issues were covered from the donations of local inhabitants, sponsors, and municipality: the city financed the pavement, trees, furniture - by residents and sponsors. (Better Sychiv 2017) Following success inspired new projects including festivals, ecology education, and their next big urban project – revitalization of central district square in front of St. Lady Mary's Church. Important meaning for development of mass housing areas in Ukraine the NGO "*Better Sychiv*" gained due to publishing o development strategy. "*Sychiv 2027: District for everybody*" - is both a road map and a strategy, developed with the help of City Institute – local communal organization and analytical center, includes three main priorities set to make district "Interesting, barrier-free, green".   Hence receiving the feedback and support from the city, investors, and professionals, Better Sychiv can be considered a successful example at all stages**.** Inclusion of the transformation results into the city´s development agenda and receiving the support of the administration secured transformation results and provided possibilities for future development.

Fig. 4 Newly created Dignity square in Sykhiv, Lviv (Source: NGO "Better Sykhiv")

4. Final considerations

Ukrainian post-Soviet housing areas have a chance to become a framework for the new urban transformation. Public activity may become a start for the development of cross-sectional and location-based strategies, keeping an insight into the overall urban situation. Three reviewed transformations reveal interactions between actors in the process of democratic development. Single spatial changes are possible through the sole efforts of the residents, but on a larger scale, they cannot substitute for coordination with NGOs and municipalities. The experience showed that it is important to integrate single actions into a wider transformation scenario and engage all relevant actors. Cooperation with professionals is important to provide the projects with data, vision and legal support. For successful project completion and cumulative learning, there is a need to create a communicative platform at the city level. The question remains whether single actions will be able to receive state support and contribute to the formation of a state revitalization program.

References

Better Sychiv "Сквер Гідності", ("Dignity Square"(in Ukrainian), [online] Available at: http://bettersykhiv.org/skver/ [Accessed: 05.05.2019].

Fisher, F. (2001) „Building Bridges through Participatory Planning. between citizens and local governments to work more effectively together" [pdf] UN-Habitat, Available at: https://unhabitat.org/wpdm-package/building-bridges-through-participatory-planning-part-1/ [Accessed: 6.04.2019].

Mayak. (2018). "In Odessa, urbanists and architects have figured out how to make a residential courtyard "livable" on Cheryomushki". Available online at https://mayak.org.ua/news/izmenyaya-mesta-v-odesse-urbanisty-i-arhitektory-pridumali-kak-sdelat-jilym-dvor-na-cheremushkah/ [Accessed: 19.03.2019]

Oliynyk Nataliya (2009): "Концептуальні підходи до формування стратегії реновації житлового фонду" ("Conceptual approaches to the formation of a housing stock renovation strategy".) In Bulletin of the National Academy of Public Administration under the President of Ukraine, pp. 71–79.

Restrepo Cadavid, P.; Quintero E., (2015): Ukraine Urbanization Review. The International Bank for Reconstruction and Development / the World Bank. Washington, DC (ASC15060). Available online at http://documents.worldbank.org/curated/en/213551473856022449/pdf/ACS15060-REVISED-PUBLIC-eng-web-text-cover.pdf, [Accessed: 20.05.2019]

Sergatskova, Y., (2015) "Как вдохнуть жизнь в постсоветский город на примере Харькова", ("How to bring life into the post-Soviet city on the example of Kharkov "(in Ukrainian), Ukrainska Pravda, [online] 28.09.2015. Available at: https://life.pravda.com.ua/society/2015/08/28/199402/ [Accessed: 13.05.2019].

Smirnova M., Gagina E, Zapotochnyi Y. (2018) «Changing Places. Благоустрій прибудинкової території» („Changing Places.Improvement of the adjoining territory. Short manual on project realization"(in Ukrainian), Impact Hub Odessa, Odessa, Ukraine, Report.

The Changing Urban Periphery in Post-Socialist Veszprém

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Abstract

After socialism Hungarian towns get new motivation. The regulation allowed several solutions to improve and establish industry, however the investments in most of the cases finally reduced natural, semi natural, agricultural territories around the town. Recognizing the special case of Hungarian towns, it is necessary to research the trends in land use changes and to find the motivation behind it. Our research area is Veszprém, Hungary with a considerable history and an impressive restructuring period. Our main research questions are: How has changed the land use and morphological urban structure in Veszprém after socialism? How has the transformation affected the natural and semi natural areas? How has influenced the new economic era the former industrial and economic areas? How can the changes be explained? In our research the land use changes of Veszprém were analyzed with the help of topographic map from 1980 and Corine and Urban Atlas Databases between 1980 and 2018. The paper identifies the most important trends in land use. Our results give evidence to the most vulnerable territories at peri urban areas of Veszprém and the effectiveness of land use plans of 2005. The results could contribute the further urban management plans for peripherical areas.

Keywords

urban sprawl, land use change, Veszprém, peri-urban territories, land use management

1 Introduction

Large part of Europe is affected by urban sprawl, also post-socialist countries, so Hungary (Hennig et al., 2015). However, the increase of in-built territories is typical, the analyses are focusing on Metropolis regions, like Budapest agglomeration. In our study we highlight the trends and characters of land use changes in the case of smaller urban environment with the example of Veszprém, Hungary. We focus on the effects of transition, how new economic investments used the land around the town, and how the agricultural and natural and semi-natural areas changed.

There is also a growing body of literature that recognizes the importance of the most influenced territories: role of the central city and its settlement network (Szirmai ed., 2011), the periphery, edge, peri urban territories (Csemez, 2008) and attempts to find regulatory or other assets to control or manage the growth of urban areas (Geneletti et al.,2017; Allen, 2003; etc.). In Hungary spatial planning could not find satisfactory answer yet, in spite of the fact that higher level European strategies foster the importance of control of urban sprawl (EC, 2011). The paper attempts to identify the relation between the land use changes

monitored by Corine database and land use plan of Veszprém from 2005.

2 Methods

Using the topographic, Corine land use maps and Urban Atlas from 1980, 1990, 2000, 2006, 2012 and 2018 the changes of land use has been calculated and visualized according to the land use categories of Corine terminology:

- artificial (built-in) surfaces (urban fabric; industrial or commercial units; road and rail networks and associated land; mine, dump and constructional sites; urban green areas),
- agricultural areas,
- natural, semi natural areas like forests, wetlands, water bodies.

According to these categories we analyzed the spatial distribution of the land use and identified the most important tendencies between 1990 and 2018. The changes were classified into two direction: changes to artificial surfaces (except urban green areas) and all the other transformations. Thanks to this method we were able to show the urban sprawl around Veszprém.

2.1 About Veszprém

Veszprém administrative area is about 12 690 ha, has a specific topographic location thanks to the vicinity of lake Balaton, foot of Bakony mountain and Séd creek. The town's former administrative and educational character has changed. New technical university was founded, and several industrial sites were opened, the population grew from about 20 500 (1949) to about 63 000 (1990) during the socialist era. Now Veszprém has almost 60 000 (2018) inhabitants (teir.hu). The transition brought a less intensive development, but today Veszprém is an economical focus point of Western Hungary thanks to several companies, which have chosen Veszprém as new location.

3 Results

The **changes in land use** show the increase of artificial surfaces (+414 ha), decrease of agricultural areas (-452 ha) and a slight increase of natural and semi natural areas (+37 ha) between 1990 and 2018 (Table 1.). Within the artificial surfaces, urban fabric and industrial, commercial and transport units show remarkable expansion (+446 ha).
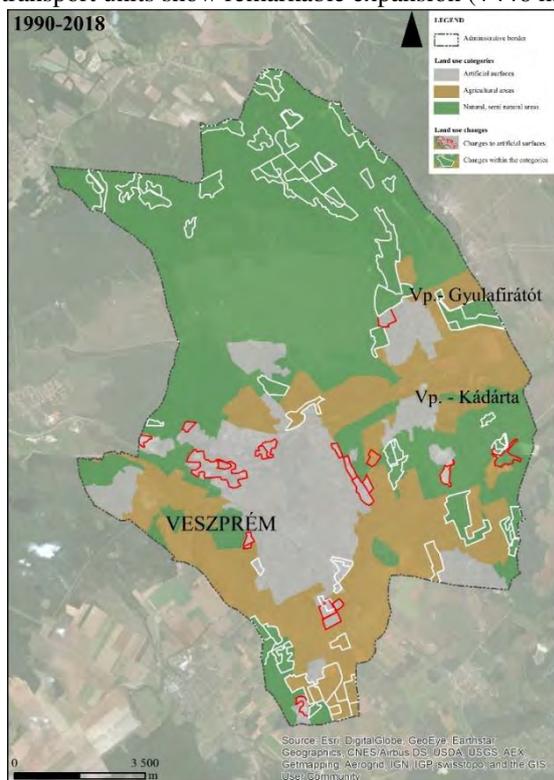

Fig. 1 The classified land use changes in Veszprém between 1990 and 2018, showed on the map of land use in 2018 (Data source: Corine)

Most changes happened between of 1990 and 2000, 807 ha changed, 6.4% of the whole area of Veszprém town. During this period the largest agricultural and natural and semi natural area was turned to artificial surface (0.9% of

Veszprém area) after the transition. Lots of agricultural areas transformed to artificial spaces and other semi natural areas –thanks to abandoned cultivation and cheap land prices presumably. The **characteristic** of newly settled artificial areas (according to Corine adjusted according to Google Earth and land use plan of 2017) is different at the different periods (Fig. 2). Altogether 255 ha changed between 1990 and 2018, 2% of the whole area of Veszprém. The largest area transformed to artificial space between 1990-2000, as the effect of transition and the following freedom of municipalities. In this period around 110 ha agricultural or natural and semi natural surfaces were dedicated to industrial and commercial units. However, the size of newly settled artificial areas fallen back later, the dominance of industrial, commercial and transportation unit stayed.

	1990	2000	2006	2012	2018
Artificial surfaces (ha)	2031.5	2140.9	2180.0	2347.6	2445.5
Agricultural areas (ha)	3815.9	3701.8	3668.3	3553.1	3363.8
Natural and semi natural areas (ha)	6845.3	6849.9	6844.4	6790.7	6882.1

Table 1 Land use within the administrative border of Veszprém (Data source: Corine)
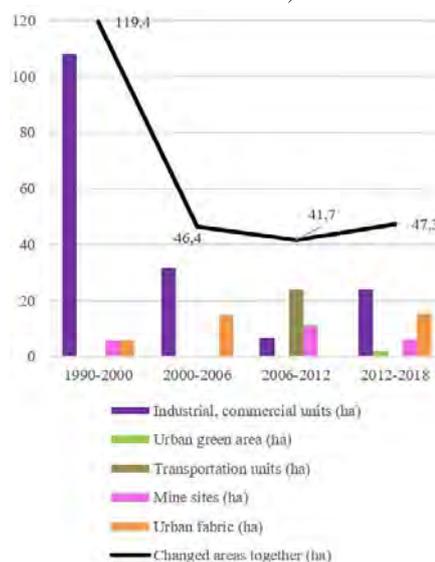
Fig 2 Distribution of the new artificial spaces between 1990 and 2018 in Veszprém. (Data source: Corine Database, Google Earth and land use plan of 2017)

3.1 Spatial pattern of changes

The **spatial pattern** of changes (Fig. 1) shows that artificial changes are around the in-built areas and former industrial sites. Not only the core urban area, Veszprém, but the new parts, former village of Gyulafirátót are also affected by this trend. The areas not directly connected to urban body are mines, dumps, transport territories and

industrial sites. It is also worth to mention, that the areas of **urban periphery and rural-urban fringe** (Iváncsics and Filepné, 2018) are slightly affected by the changes, however, these areas are supposed to be most vulnerable ones in connection with urban sprawl.

3.2 Change of industrial sites

Fig. 3 The classified land use change in Veszprém between 1990 and 2018, and the industrial sites in 1980 and 2012 (Data source: Corine, Urban Atlas)
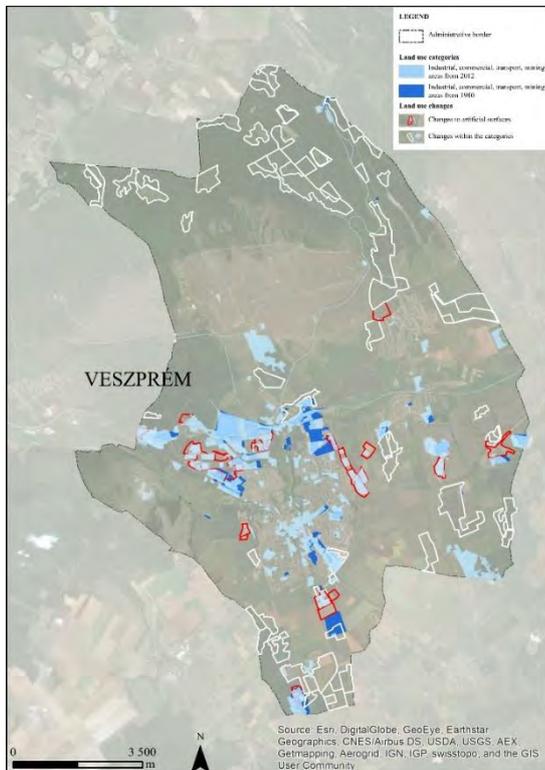
We highlighted categories of Urban Atlas from 2012 (12100 Industrial, commercial, public, military and private units; 12230 Railways and associated land; 13100 Mineral extraction and dump sites) and the delineated areas of topographic map from 1980 are shown at Fig. 3. The map shows, that most of the industrial sites (from the socialism and later) are mostly concentrated on the town's edge. The Northern industrial park is dominant, the first sites were settled during socialism late. We also compared the industrial areas to land use changes. As the industrial sites almost situates around the urban body, the new artificial areas also have the same pattern. Except one plot at Gyulafirátót, all the other, new artificial areas are in the neighborhood of industrial sites from 1980s. Former industrial sites were around the railway stations according to historical maps from 1927 and 1959. The trend has changed, green field industrial sites settled during the socialist era preserved after the transition and industry

expanded to their neighborhood areas. It is important to highlight that the Urban Atlas is not applicable for analyzing the urban center, because it defines the town center as a whole as commercial area, that is a reason why it is illustrated as industrial site (Fig. 2).

3.3 Comparison of the changes and land use plan from 2005

There are several tools to control urban sprawl in Hungary. The most important on country level is the renewed Act CXXXIX on **Land Use Framework Plan of Hungary** and Priority Areas adopted in 2018, that tries to guide the settlements developing according to the compact settlement structure. This act aggregates the interest of different fields, like nature conservation, agriculture, forestry etc.
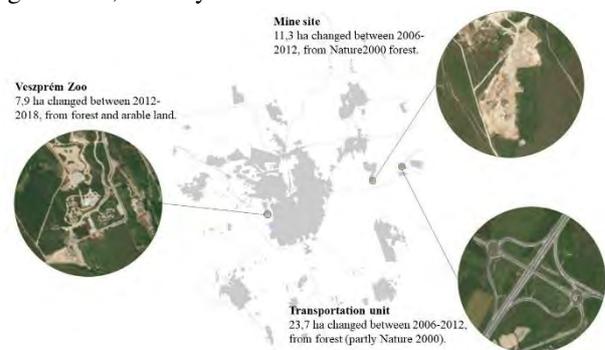

Fig.4. Changes are not fit into the Veszprém land use plan from 2005

The municipalities follow the regulations of the national spatial plan. However, the frame is given, the municipalities have a considerable freedom in management of the land use system in their administrative area by elaborating urban management plans (urban development plan, land use plan and building plan). We compared the land use changes and the land use plan of Veszprém from 2005. Altogether 87 ha area changed negatively – turned to artificial areas – between 2006 and 2018, after the adaption of urban management plans in 2005. Most of these changes (81%) followed the spatial structure of the land use plan. Specific sites turned to mining and transportation areas between 2006-2012 from semi natural areas do not fit into the foreseen spatial structure of the masterplan. It is also considerable, that these plots were former Natura 2000 areas. Another example is the new area of Veszprém Zoo, that turned to urban green area from forest for recreation (Fig.4). Despite of negative examples the new artificial areas are directly connected to the morphological urban area and urban sprawl is controlled, as it was foreseeable in the land use plan from 2005.

4 Conclusion

The **land use changes between 1990 and 2018** resulted the expansion of artificial surfaces and minor increase of natural and semi natural areas. Agricultural areas are the most vulnerable land use at Veszprém administrative area, these were mostly turned to artificial and natural or semi natural areas. This is a general trend in Hungary and the result correspond with the findings of the case study of Kecskemét, a Hungarian town with settlement group municipalities (Ricz et al., 2009). Also, remarkable that there is no strict regulation in 2005 for agricultural areas. Furthermore, natural and semi natural areas are more protected, thanks to Natura 2000 areas, and the relative strict regulation of forests. As our paper focus on urban sprawl, artificial surfaces were distributed to further categories and analyzed in given **time periods**. The most significant transformation to artificial surfaces is between 1990 and 2000 because of the effects of transition, however this falls behind the experienced 8% in Kecskemét in the same period (Ricz et al., 2009). The expansion of industrial sites is dominant between 1990-2000, 2000-2006 and 2012-2018. During the period of 2006 and 2012 the most areas were turned to transportation units. The increase of urban fabric stopped between 2006 and 2012. These trends can presumably be explained by the effects of economic crisis in 2009 and the EU funding. Further statistical analyses could prove the reasons behind the changes.

The **new artificial surfaces** are situated around the morphological urban area, in the neighborhood of former socialist industrial sites. Exceptions are a transportation unit and a mining site. Furthermore, exactly these plots were not planned in the land use plan from 2005. The new artificial surfaces are outside the former delineated urban periphery or urban-rural fringe of Veszprém, however these are the most vulnerable areas of urban sprawl according to the literature. The result can be explained by the economic performance of Veszprém, compared to other Hungarian towns. Also, important reason can be the special natural factor – situation of Natura 2000 areas, and the relative large military area at the Northern part of the town. Further comparison is needed to understand the importance of the economy in urban sprawl at medium sized Hungarian towns. It would be also interesting to complete the analyses with former time periods (during socialism) to understand the dynamics of the development of the urban body.

The **industrial areas** are settled in the late socialism and this heritage seems to determine the location of new industrial and commercial sites in post-socialism. Most of the new industrial sites situated in the direct neighborhood of former plots. It is also worth to mention, that until 1959 the railway network attracted industrial and commercial investments. This trend changed and now the former industrial sites and the proximity of morphological urban area is attractive. It would be worth making a deeper research on the transformation of former industrial sites and brownfield areas of the town. As a methodological remark, it is necessary to mention that the Urban Atlas defined the town center as a commercial area, so it limits the possibilities for a more detailed analyses of industrial areas. The **land use plan** of the town is successful, because the new artificial areas are strongly connected to the morphological urban area. Some unexpected changes occurred (new transportation junction, expanded zoo and mining plot), whose necessity is needed to be proved with further research to understand the arguments for changing plans. The limitation of further analyses of management plans of the municipality was the lack of availability of digitalized maps before 2005. The analyses of former country level land use plans would mean a further path of our work.

References

Allen A. "Environmental planning and management of the peri-urban interface: perspectives on an emerging field", Environ. Urban. 15(1), pp. 135-148, 2003.
https://doi.org/10.1177/095624780301500103

Csemez, A. "Változó városkörnyék" Falu Város Régió, 2008 (1), pp. 45-51, 2008.

EC (European Commission) "Road Map for Resource-Efficient Europe", (COM(2011) 571), Brussels, 2011.

Geneletti, D., La Rosa, D., Spyra, M., Cortinovis, C. "A review of approaches and challenges for sustainable planning in urban peripheries" Landscape and Urban Planning, 165, pp. 13, 2017. http://dx.doi.org/10.1016/j.landurbplan.2017.01.013

Hennig, E. I., Schwick, C., Soukup, T., Orlitová, E., Kienast, F., Jaeger, J. A. G. "Multi-scale analysis of urban sprawl in Europe: towards a European de-sprawling strategy" Land Use Policy, 49, pp. 483-498, 2015.https://doi.org/10.1016/j.landusepol.2015.08.001

Iváncsics V., Filepné Kovács K. "Nagyvárosok területi növekedésével kapcsolatos fogalmak értelmezése és bemutatása Veszprém példáján", In: Fazekas I.; Kiss E.; Lázár I. (eds.) Földrajzi tanulmányok 2018, MTA DTB Földtudományi Szakbizottság, pp. 299-303, 2018. ISBN: 978-963-508-897-3

Land use plan of Municipality Veszprém 2005, 61/2003. (XII. 22.)

Land use plan of Municipality Veszprém 2017, 213/2017. (IX.28.)

Ricz J., Salamin G., Sütő A., Hoffmann Cs., Gere L. "Koordinálatlan városnövekedés az együtt tervezhető térségekben: a települések lehetséges tervezési válaszai" Research report, VÁTI Budapest pp. 169. 2009.

Szirmai, V. (ed.) "Urban Sprawl in Europe. Similarities or Differences?" Budapest, Aula Kiadó, 2011. 280 p.

TEIR, Országos Területfejlesztési és Területrendezési Információs Rendszer, www.teir.hu

Housing Estate Transformation and Functional Context: a Case Study in Krasnoyarsk (Russia)

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Abstract

This study is based on an analysis of Krasnoyarsk housing estates of the 1960–1990 construction period. In general, they share such problems as the violation of the functional, spatial continuity due to the integration of citywide objects; reduction of safety because of unauthorized transit pedestrian flows of people and activities; limited physical accessibility due to large-scale intervention of urban and service processes. Renovation of these estates should have definition zones reflected in the differences of urban context variation. Pursuing comfortable and livable surroundings, the solution provides for ranking of pedestrian and transport flows by regulating the functional usage of ground floors. New functional content should vary: in the center and on the periphery they must be different in proportions and scale. The space of the neighborhoods should feature a division into four types: private, semi-private, semi-public and public. As an implementation tool, a number of typological urban models were identified: a pedestrian street, a collective recreation area, a courtyard, etc., which have the conditions necessary for creating a comfortable living environment based on functional neighbourhood connections.

Keywords

micro-district, neighborhood, mass housing estates, ground floor

1 Rationale for relevance

Historically, urban areas were structured around functional communications. So the first European cities were formed by craftsmen's houses along the paths leading to the feudal castle (E.Grushka). The turning point of urban planning of residential areas comes after the Second World War - the period of socialist cities. In Russia, the system of regulatory acts and standards still in force to date was adopted in 1958. The basic unit of the new urban theory was a system of neighborhood design which was subordinated to the dictates of sanitary norms, efficient placement of buildings and ease of mass construction industry. The organization of neighborhoods territory traditionally provided a combination of the same type of tenements around the courtyards, infrastructure facilities, playgrounds and sports grounds, open and public recreational spaces. Nowadays the situation has become aggravated by the growth of automobilization, the freedoms of privatized property and intensive development of the market economy. As a result, there are changes in service provisions and a violation of the balance of intra-district facilities. The newest behavioral models require new ways of organizing urban residential areas. The strategy of the XX century, aimed at solving the acute problem of housing, is currently not able to satisfy the needs of modern society.

2 The present of Soviet housing estates in Krasnoyarsk. "Zelenaya roshcha"

Mass industrialization of the Soviet construction industry from the 1960s to the 1980s was mainly aimed at meeting the needs of the population in a minimum amount of living space. By 1956, about 70% of housing construction in the USSR was built as standard projects and in accordance with the planning organization of the micro-district type. Until the mid-1970s, a significant share was occupied by the construction of medium-rise buildings, the average number of which in Russia today exceeds 25% of the total number of houses.

Krasnoyarsk ranks third in the Russian Federation in the number of housing areas. There are about 50 micro-districts of complex development in Krasnoyarsk. The number of panel-type buildings constructed in the period from 1960-1991 is approximately 4000, with the peak of development in 1960-1969. 33% are 5-storey buildings.

Housing construction in Russia in general and in Krasnoyarsk in particular still follows the patterns of Soviet architectural and urban solutions. The mass housing estates are still developing according to the regulations of the normative documents, which have lost their relevance in several positions long ago. Questions of the quality and comfort of residential areas of the Soviet and modern periods largely fall within the responsibility of the users themselves. This fact leads to spontaneous and unplanned scenarios of development of residential areas.

As a matter of fact, the largest by scale complex of mass housing development is district "Zelenaya roshcha" (Green grove) (Fig. 1).

Fig. 1 District of "Zelenaya roshcha" (Photo by Sergey Filinin. Source: https://feelek.livejournal.com/101879.html)

Its area is 277.85 hectares. It includes nine micro-districts, the "Gvardeyskiy" park and a full infrastructure: 20 kindergartens, 11 schools, 8 educational institutions of secondary specialized education; 7 health centers in different fields; a large number of services. Most of the blocks were erected in the late 1960s-early 1970s. From the mid-1970s to the 1980s, the first nine-storey blocks in Krasnoyarsk were built here; in 1993 the typology was supplemented by several ten-storey blocks. Only nine single-entrance blocks with individual planning were built here in 2007-2008. In 2015, three monolithic-brick houses were commissioned, one of them with twenty-five floors. The analysis of land usage of the district shows that this micro-districts have gained a valuable public space with a rich greenery landscape, because more than 50% of the site is reserved for recreational purposes. However, 20% is occupied by car parking places; residential buildings occupy about 12% of the area; 5% is allocated to business and commercial purposes; 5% - to educational facilities; 8% - to roads.

The uniqueness of this area lies in its preservation of its original planning organization. The reason is its relative remoteness from the active centers of the city. Today it is still possible here to find clear functional zoning including the remnants of the existing structure of cultural and consumer services, original monochrome blocks without any kind of reconstruction, exaggerated landscape areas, and outdated but still relevant equipment yard spaces.

Field surveys as well as analysis of Internet information resources, allow us to identify the nature of the development of the area shown:

 − the main changes relate to the development of pedestrian trade and transport routes (Fig. 2).

Fig. 2 Tire shop in the inner territory of the micro-district №3 (Photo by author, 2019)

Such concepts as the function of context or of communication are excluded from its planning organization. The unprompted ties led to warp of functional zones, the fabric of housing areas has acquired ineffective gaps, and streets are restricted, cutting the area into pieces;

 − The next problem is the freedom of planning of the area, which belongs to everyone and nobody at the same time (Fig. 3).

Fig. 3 Traditional green vacant lots in "Zelenaya roshcha" district (Photo by author, 2019)

Intermediate areas lack fixed usage scenarios, directions and goals for pedestrian activity. Such areas are usually filled with garages and utility structures; where pedestrian

and transport routes are adjacent to kiosks and other service facilities (Fig. 4);

Fig. 4 Kiosk in "Zelenaya roshcha" district

(Photo by author, 2019)

–   Often, the absence of borders brings chaos to the organization of property rights, but this is not a problem in this micro-district, the because landscape areas are excessively large (Fig. 5);

Fig. 5 Formation of private plots in "Zelenaya roshcha" district
(Photo by author, 2019)

–   residential areas are also under a lot of pressure regarding transportation (Fig. 2). The increase of transport speed in the city has led to tissue sprawling between residential areas. The internal pedestrian organization of the Soviet micro-district has been destroyed. In addition, localization of districts broke down the social ties of the residents. Streets moved in status towards greater restrictions;

–   the majority of changes affected the transformation of ground floors. The typical layout of lower and upper floors had a negative impact on their reputation. For the ground floor, this was justified by the lack of balconies and noise coming from the surrounding area. Increasingly the first floor shifted into a commercial function. And as mentioned earlier, the distance from the city center made it possible to avoid the integration of office functions and use the lower floors to house services. Most of converted ground floor premises are still concentraited at the intersection of pedestrian and transport paths and near public transport stops: that is, in

places defined by the original planning organization (Fig.6).

Fig. 6 "Sovietskiy" Department store. Point of highest concentration of trade near the "Elmina st." bus stop.
(Photo by author, 2019)

The uniqueness of this area is also reflected in the preservation of natural market squares, where residents sell products of their own gardening (Fig.7).

Fig. 7 Market square.
(Photo by author, 2019)

However, a number of commercial functions are located with access to yards or loading docks. The impulse uncontrolled, chaotic process of "capture" of semiprivate (yard) space caused a number of problems:

• violation of the integrity of private physical boundaries due to the integration of citywide use objects;

• degradation of spaces adjacent to residential blocks, and of the operating modes of the residential facility, owing to the organization of services.

• interference with the operation of private dwellings;

• deformation and insecurity of yard space due to the displacement of internal red lines and increase in traffic;

• change in operation of intra-district areas due to the crossing of transport and pedestrian paths;

• insecurity of residents in general, owing to integration of transit pedestrian ways of unauthorized people, processes, activities;

• restriction of physical accessibility of the territory;

• inefficient use of land recorded as green space.

3 Renovation possibilities

The modern directions of development and the principles of planning of urban areas has considerably changed after the collapse of the USSR. The expansion of the influence of life processes from the apartment to the wider urban context led to the formulation of the concept of "habitat". Here the living area is considered as an external, additional part of the house itself and consists of areas of squares, streets, lanes, where the household and recreational needs of the population are realized.

In response, narrowly mathematical and economic parameters, based on the evaluation of investments and the period of their payback, have integrated approach that can take into account the social context, urban processes, socio-cultural characteristics of the population and the psychological attitudes of certain social groups. The implementation of this goal in practice means increasing the humanity of urban housing estates based on micro-district structure through the development of pedestrian infrastructure, increased the availability and comfort of open spaces, ensuring a barrier-free environment and guaranteeing inclusiveness, equality and convenience for all social groups.

Comparative analysis of the examples of mass housing in Krasnoyarsk and areas of reconstruction and new construction in Germany, Finland and the Netherlands make it possible to formulate a set of principles for further development of the areas of the socialist period, such as "Zelenaya roshcha". These include the following:

- valuable open spaces with a rich greenery landscape on a human scale. A most valuable and unique element, which should become a "bridge" between courtyards and community;
- permeability of space. Modern methods of reconstruction (including our case study of the German and Dutch experience) are aimed at the revitalization of space, partly by marking the boundaries of areas with different ownership. The establishment of borders should be preventive rather than a physical barrier. It can comprise low-cut hedges, vegetation, etc;
- according to Finnish experience, open common areas can be divided into several categories of at least 4 types: private, semi-private, semi-public and public;
- The ground floor should be taken as a functionally determined part of a block, formed under the influence of the social and spatial environment and receiving its functional content in a particular place (socio-functional, urban, socio-economic, geographical, etc.).

4 Conclusion

As it is shown in this study, residential areas of standard-panel housing are currently at the stage of spontaneous self-development and self-preservation. However, they feature a unique self-identification of public spaces, and a high potential for the development of a comfortable living environment. The advantages of the area include the human scale of residential ensembles, a sufficient size of open space area, as well as pedestrian accessibility of different services.

The main advantage of the "Zelenaya roshcha" estate is its location on the banks of the Yenisei river and the proximity of a rich recreational area of the city. In my study of the area the unique objects of the Soviet period were identified; the results of modern activity, indicating a social and prosperous atmosphere in community gardens (Fig.8).

Fig. 8 Community garden in "Zelenaya roshcha" district.
(Photo by author, 2019)

I think this is a good basis for the future development of the site. The main challenge is the regulation of land use and the threat of appropriation of residential areas by commercial objects, with violation of the integrity of the living space.

Acknowledgement

References

Benkő, M. (2012) Evaluating factors in the image of housing estates (Budapest: Periodica Polytechnica Architecture)

Kamalova K. (2017) Urban context as a factor of formation of habitats (Moscow: MARKHI)

Malinina T.G. (2015) Mass housing as a form of creativity. The role of social engineering and creative ideas in designing living environments (Moscow: BooksMArt)

Tensions of Socialist Urbanization and its Consequences for Post-Socialist Budapest

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Abstract

The phenomena of post-socialist urban development find a partial explanation in the internal tensions of socialist urbanization. In this paper, five substantial tensions will be introduced The post-socialist model of urbanization in Eastern Europe, especially the transformation in the early years following the respective regime changes, was highly determined by legacies of the post-war socialist period. Both the built environment in its physicality and the culture and practices of the production of space were inherited from socialism, while the socialist modus operandi of urban planning often survived the introduction of the market system. Based on the single case study of Budapest, this paper claims that some of the main spatial-structural, which later also had a decisive effect on the character of the post-socialist transformation. The paper sheds light on the nexus between these tensions and the post-socialist emergence of a type of urbanization mostly characterized by business-dominated development projects not integrated into any grand urban design. The methodology for the study draws on content analysis of policy documents and secondary sources of analytical information, supplemented by personal interviews with experts.

Keywords

Antiurbanism; housing inequalities; irrational land-use; shortages of space; prematute welfare-state; Laissez-faire type post-socialist urbanization;

Socialism's antiurbanism

Rapid urban development was a core promise of socialist regimes. However, as geographer György Enyedi argues (1982), an asynchronic relation between planning and spontaneous development provided for 'antiurbanism' under socialism. This, according to Enyedi, was a consequence of belated urbanization cycles. His fundamental thesis was that Hungary's economy had been characterized by a territorial deconcentration of productive forces in the extensive phase of its socialist development, complemented by processes of deconcentration to its settlement network. At the same time, settlement legislation, as well as other sectoral regulations with a strong impact on urban development, have maintained a concentration effect.

As a result of this discrepancy, the proletarianization of the formerly agricultural workforce could not be followed by a comparably fast migration of this population from rural areas to urbanized centers (See: Konrád, Szelényi, 1971). On the contrary, administrative measures were often put in place to restrict metropolitan growth by preventing would-be migrants from settling in the major cities. In the case of Budapest this resulted in the exponential growth of villages in poorer areas of the city's agglomeration. It was relatively easy to obtain a new job in the expanding socialist industry but challenging to become a legal resident of the capital. The sociologist György Berkovits (1976) described this phenomenon and the resulting aggravating life circumstances of the worker-turned-farmers in his local history publication of Budapest's margins. The new proletariat had to settle under these miserable living conditions beyond the fringes. They were forced to commute long hours every day and were deprived of the advantages that came with being an inhabitant of a metropolitan center. Besides housing, urban functions not directly related to industrial production – such as commerce and tourism – also remained underfunded and underdeveloped in the socialist city.

This is the first important tension of socialist urbanization: The shortcomings of infrastructure, housing, and services, caused by forced industrialization, became a major obstacle in the way of urban development.

Housing inequalities under state socialism

In response to the housing shortages in the metropolitan centers, the paternalistic socialist state launched extensive

public housing programs in the 1960s and 70s. The establishment of a classless, egalitarian society was an important promise of Marxist doctrine. Replacing the market allocation of housing with an administrative procedure was seen as an important instrument in achieving this goal. However, Szelényi and Konrád (1969) found to their surprise that – despite the official propaganda according to which the socialist state has for its main aim to improve the position of the working class – the bulk of the working class was nowhere to be seen amongst the residents of the new mass housing estates. Rather, the new inhabitants were predominantly middle-class people, such as professionals, intellectuals and bureaucrats.

The finding that new public housing was allocated systematically to higher income groups reveals the second major tension of socialist urbanization. Instead of eliminating disparity, its administrative allocation procedure resulted in a new kind of inequality; one based on access to redistributive systems.

The premature welfare state

Furthermore, the theoretical model of the socialist housing system worked based on the economic model of the 'premature welfare state' – a term coined by the economist János Kornai (1999). The exclusion of a real market, the omission of housing costs from incomes, and the centralization of all important investment decisions characterized a system in which all important aspects of housing were meant to be under the control of state institutions. Rents were kept artificially low with the immediate consequence that the state was neither able to provide new housing at an acceptable level, nor was it capable of properly maintaining buildings already in its portfolio.

This takes us to the third tension: The paternalistic socialist states implemented welfare systems which they then underfinanced and, thus, kept on a rather low level.

Competition for space and irrational land-use

The planning of economic, social and spatial development was carried out under socialism by political authorities and state agencies. The Polish geographer Bohdan Jałowiecki pointed out (1988), however, that the planning decisions were often made under pressure by competing state enterprises and protagonists of the industry's different branches. In their 'competition without a competitive market', socialist state enterprises aimed at

an accumulation of the means of production, as opposed to capitalist firms that seek profit. By maximizing the assets made available to them, including space, they could secure political influence and constant growth – at least in terms of the land occupied. Jałowiecki argued that the priority given to industrial expansion, the elimination of land rent, and the competition of enterprises for space have led to the occupation of urban space by industrial enterprises and their auxiliaries, such as offices, housing and social facilities (Fig. 1).

I will call the resulting archipelago of extensive industrial land use in central areas of cities the fourth remarkable tension of socialist urbanization. Centralized spatial planning was seen as entailing the promise of rational land use, but it failed to fulfill that promise.

Fig. 1. Downtown factory and office campus of the Hungarian Optical Works (MOM) with the Buda Castle in the background. Photographer unknown, from the MOM Memorial Foundation's archives, 1976.

Shortages of space

Another aspect of state socialism, its system of paternalistic redistribution is discussed by the anthropologist Katherine Verdery (1996). She summarizes this regime as the Party's efforts to secure legitimacy and popular support by taking care of people's needs through centralizing the social product and redistributing it in the form of jobs, affordable goods, free health care and education, subsidized housing, and so on. According to Verdery, the socialist mode of operation sacrificed demand and consumption in favor of production and the control of supply. This can be explained by the constant need to hoard the means of production in order to enhance redistributive power, which resulted in heavy industry having been the regime's dominant preference at the expense of consumer industry. The aim of maintaining strong central power was better served by producing things the regime could continue to control than by giving away goods. Interestingly, mass housing was a rare case where the regime managed to a certain extent to negotiate

between the two preferences: it supplied masses with assets without losing central control over these, as they continued to be administered as part of the regime's resources. Similarly, the hoarding of space by state-owned companies, besides Jałowiecki's interpretation of it being the result of the companies' aim of accumulating means of production, can also be explained as a way for the central power to accumulate resources in the center via the control of these through the industrial companies in its possession. Kornai's theory of the economy of shortage (1980), combined with Jałowiecki's observation on enterprises' competition for space and complemented by Verdery's thesis on the basic incongruence between what was necessary to legitimize the regime as a paternalistic state and what was essential to maintain its centralized power, will lead us to the fifth remarkable tension of socialist urbanization: Although cities of the Eastern Block were not peculiarly dense, a constant drive for expansion and inefficient land use resulted in shortages of space.

The transformation shock

After the regime change, central urban areas were still dotted by a hodge-podge of real estate in the possession of industrial firms, while socialist industry suffered a serious set-back and a significant part of it collapsed. In the meantime, a return to market evaluation of real estate was carried out, complemented by an 'overnight' privatization of properties. In Hungary, the 1991 Law on Transferring Ownership of State Assets to Local Municipalities assigned the ownership of formerly state-held apartment blocks to the district municipalities, while the Housing Law of 1993 determined the conditions under which these could then be privatized. It assigned a right of pre-emption to the apartments' then tenants and resolved that the local municipalities were free to set the exact purchase price within a lower limit of three times the last year's rent and an upper limit of 60 percent of the apartment's estimated market value – disregarding the social status of the buyers.

As a result of the transformation shock, both the state and local municipalities were short on financial resources, and the shortage of money pushed the latter towards alienating as much of their newly acquired housing stock as possible – the faster, the better. The forced pace of privatization freed them from much of their maintenance and development responsibilities as they got rid of large proportions of their portfolios, mostly comprising buildings in need of renovation (Fig. 2). Furthermore, they could divert most of their revenue from privatization to

other public tasks, although this primarily meant filling loopholes in the budget rather than financing structural reforms of municipal duties. This practice of massive privatization received heavy criticism based on a multitude of arguments. Firstly, it minimized the municipalities' portfolios of affordable tenements at times when large segments of the urban population were driven into poverty by the transformation crisis. Secondly, by failing to set any income or wealth cap on eligibility for subsidized buying, it led to a transferal of property rights at highly subsidized rates to people not needing such allowances. The injustice of this procedure was made heavier by the fact that only those better off were in a position to pay the full amount at once and, hence, benefit from further substantial discounts. Third, the resulting fragmented ownership structure also proved to become an obstacle in the way of renovations, as owner consensus was difficult to achieve. Fourth, as not only housing but also development land was alienated in large quantities and often before development strategies would have been prepared for these, public authorities lost the ability of implementing strategic projects in key locations and, thus, of controlling urban transformation.

Fig. 2. The uneconomical privatization gift: untended housing from different eras in Budapest's 8th district. Photo by the author, 2010.

The major consequence of this wave of privatization can be summarized as enhanced spatial segregation. It mobilized those better off and, as sociologist János Ladányi (2007) points out, from the mid-1990s on their movements changed from switching to bigger or better apartments within their original districts to moving from deteriorating neighborhoods to single family houses on the city's fringes or in the agglomeration. This trend resulted in massive suburbanization on the one hand, wherein Budapest lost approximately 20 percent of its population within the first decade after the regime change, and in the ghettoization of large areas in central urban areas on the other. This tendency most strongly affected Budapest's

second urban belt, as it was delineated by Szelényi's 'camelback theory' (1983) and described by the historian Elisabeth Lichtenberger's study (1994) pointing at slum formation in Budapest along the second ring road.

Laissez-faire type post-socialist urbanization

The combination of the deteriorated, structurally weak residential neighborhoods and vacant industrial land in the second urban belt confronted the under-resourced post-1989 local governments with immense difficulties in their attempts to carry out renewal programs. Driven by a lack of fiscal means, they developed a laissez-faire attitude towards private investment in the hope of it becoming the engine of spontaneous redevelopment. Big investor projects were also upgraded for the reason that politicians were left with these to demonstrate to their voters the progress of the city. This tendency, combined with the second belt's favorable position within the urban topology and the availability and affordability of land there, resulted in this area becoming the breeding ground for introverted cluster-type developments by private investors (Fig. 3).

Fig. 3. Tabula Rasa: Corporate architecture in the then new Corvin Quarter. Photo by Barnabás Honéczy, MTI News Agency, 2014.

These were stand-alone projects, planned and built mostly by one investor. They were always of a mixed-use nature, mostly with retail – or sometimes cultural – units as their core element, complemented by apartments and offices. Their financial model was either fully based on private investment or the developments were realized in public-private partnerships. The emerging urban structures are of an introverted type, usually organized around a central and protected, semi-public space, not well integrated into the public urban tissue. They are to be found exclusively in the vicinity of Budapest's second ring, an area still central yet offering relatively large areas for new development in the 1990s and 2000s.

This is how, decades later, socialism's housing inequalities, its immature welfare state and irrational land use, mediated by the transformation shock, the collapse of the socialist industry and the massive privatization of real estate, have led to an absence of significant top-down restructuring of the city and to an urbanization mostly characterized by business-dominated development projects not integrated into any grand urban design.

The combination of historical path dependencies and local peculiarities of the transition from socialism to market economies resulted in variations concerning the outcomes in the countries of the former Eastern Block. Nevertheless, the phenomena of post-socialist urbanization find partial explanation in the legacies of socialism's production of space all over Eastern Europe, as the introduced internal tensions describe broad tendencies characteristic to all formerly state socialist countries of the region.

Thus, I take the Budapest case to be a distinct story which, when closely examined, reveals itself to be replete with paradigms of general significance (See: Kiss, 2019).

References

Berkovits, György, *Világváros határában* [On the Margins of a Metropolis] (Budapest: Szépirodalmi Könyvkiadó, 1976).

Blanchard, Olivier, An Interview with János Kornai, in *Macroeconomic Dynamics*, Volume 3, Issue 3, September 1, 1999.

Enyedi, György, *Az urbanizációs ciklus és a magyar településhálózat átalakulása* [Urbanization Cycles and the Transformation of the Hungarian Settlement Network] (Budapest: Akadémiai Kiadó, 1984). Enyedi's inaugural talk at the Hungarian Academy of Sciences, December 6, 1982.

Jałowiecki, Bohdan, *Społeczne wytwarzanie przestrzeni* [Social Production of Space] (Warsaw: Wyd. Książka i Wiedza, 1988), 195.

Kiss, Daniel, *Modeling Post-Socialist Urbanization: The Case of Budapest* (Basel: Birkhäuser Verlag, 2019).

Konrád, György and Szelényi, Iván, *Az új lakótelepek szociológiai problémái* [Sociological Problems of New Mass Housing Estates] (Budapest: Akadémiai Kiadó, 1969).

Konrád, György and Szelényi, Iván, 'A késleltetett városfejlődés társadalmi konfliktusai' [Social Conflicts of Delayed Urbanization], in *Valóság* 12 (1971): 19–35.

Kornai, János, *A hiány* [Economics of Shortage] (Budapest: Közgazdasági és Jogi Könyvkiadó, 1980).

Ladányi, János, 'A lakóhelyi szegregáció változó formái Budapesten' [Changing Forms of Residential Segregation in Budapest], in *A történelmi városközpontok átalakulásának társadalmi hatásai* [Societal Impacts of the Historical Centers' Transformation] ed. György Enyedi (Budapest: MTA Társadalomkutató Központ, 2007), 199–215 (206).

Lichtenberger, Elisabeth et al., *Stadtverfall und Stadterneuerung in Budapest* [Urban Decay and Renewal in Budapest] (Vienna: Verlag der Österreichischen Akademie der Wissenschaften, 1994).

Szelényi, Iván, *Urban Inequalities Under State Socialism* (Oxford: Oxford University Press, 1983), 148.

Verdery, Katherine, *What Was Socialism, and What Comes Next?* (Princeton: Princeton University Press, 1996), 25.

European Housing-Estate Urban Renewals: The Choice of the Spatial Toolkit

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Abstract

Comparative study examines 63 cases of modernist-neighborhood urban renewals from the perspective of their spatial adjustment. Spatial tools that were used in the individual urban-renewal cases are identified and compared across countries. Individual cases are selected among West-European countries since they have several decades lasting experience in the process and thus can serve as a 'living laboratory' in some way. Main question of the study is what spatial adjustments were used addressing improvement of decaying, shrinking or just less attractive Modernist estates, and if individual countries favor certain spatial tools. To understand the particular circumstances of each country, the emphasis is put on the study of the country specifics – taking this context into account allows isolating partial tools and describe their role in the process. The cross analysis is also performed – regarding the development potential of each case and its relationship to the tools' selection. Findings of the research so far show the identical use of spatial tools across most of the examined countries. The paper aims to introduce the structure of the research and formulate achieved findings related to three typical development situations – urban shrinkage, balanced development potential and the densification of the area.

Keywords

urban regeneration, urban renewal, mass housing, large housing estates

1 Introduction

In Central and Eastern Europe, postwar housing estates represent a significant social phenomenon. Once less or more attractive form dwelling that in many places represented an effective solution to the housing crisis is revising its position in a whole new political, economic, and demographic environment. The consequences of this transformation appear with a different dynamic, however, the loss of competitiveness compared to other forms of dwelling and the impacts of low adaptability of the urban pattern appear mostly quite slowly and inconspicuously and therefore the estates are still considered stabilized structures. All the more, the ways of urban regeneration of Modernist structures represent a key societal challenge.

As the Western European experience in mass-housing urban renewal dates back to the 70s, the study of regeneration-processes evolution in this part of the Europe represents the primary source for the possible knowledge base evolvement. In contrast to several researches oriented on particular case-studies, this study aims to obtain a sufficiently high number of Modernist-structure urban renewal projects allowing to constitute a realistic comparative analysis. Taking into account that urban regeneration far more exceeds the mere spatial adjustment of a defined area, the study is narrowed through its main focus on the spatial transformations. Getting back to the Robert's definition of urban regeneration understood as 'comprehensive and integrated vision and action which seeks to resolve urban problems and bring about a lasting improvement in the economic, physical, social and environmental condition of an era that has been subject to change or offer opportunities for improvement' (Roberts, 2004) it is clear that the whole process has to be interdisciplinary rooted. Nevertheless, the spatial image of the environment we live in plays a major role, neither the physical nature nor the processes that take place in cannot be understood separately – they are interconnected.

The main research question is whether characteristic approaches within individual Western-European countries can be traced and how they correlate with the development potential of the locality. This is achieved by classifying individual spatial tools and comparing them with the characteristics mentioned above. The main benefit of this international scope is to step out from the own national

context, and build up a spatial tool-kit that can be consequently tested in Central and Eastern-European area.

2 Comparative analysis

The framework of the research constitutes a comparative analysis of 63 case studies from France, Germany, Netherlands, Belgium, Great Britain, Finland, Sweden, Denmark, and Spain. Criteria for the case-study selection are following: originally Modernist structure, phase of the project (realized or ongoing), the size of the area (ensemble of buildings and adjacent public space that could be stated a neighborhood) and the declared goal of the urban renewal process – social and economic stabilization of the area or its mere integration into the urban fabric of the city. In the set of individual projects, spatial tools used are systemized: complete demolition and subsequent development, complete demolition and subsequent landscape recultivation, partial demolitions, broadening the housing typology, adding amenities, structural alteration of houses, technical modernization of houses and adaptation of public spaces (Fig. 1).
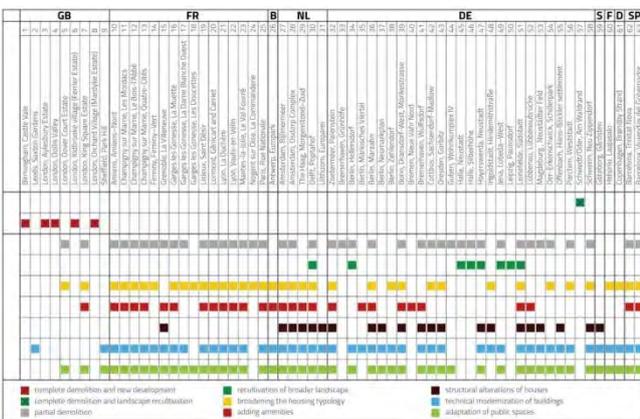

Fig. 1 Classification of case studies according to the use of spatial tools
(Source: Author)

Even though the comparative study involves examples from 9 European countries, only in Great Britain, Germany, France, and Netherlands is collected high enough number of case-studies in order to trace a characteristic approach. The remaining projects might serve more as additionally informative and the data is more valuable when examining the relationship of spatial tool's selection to the development potential of the neighborhood.

2.1 Taking the Context into Account

Even though the description of numerous differences between the state of Western and Eastern European large housing estates is not an object of this paper, some crucial facts have to be mentioned. First, modernist housing estates in Western Europe had to cope with a completely different dynamic of the market. Their share in the housing stock is below 10 %, unlike in Central and Eastern Europe, where this share is around 40 % (Kempen, 2005). Thus, the ability of Western European housing estates to remain competitive compared to the emergence of other forms of housing was significantly lower. This might be considered as the main factor, that in many cases led to a social and economic decline of such areas. The possibility to cope with the problems and emergence of urban renewal projects allowed the low portion of private ownership, existence of housing associations as a key stakeholder or uninterrupted evolution of spatial planning systems – these essential facts mark the major difference between the two halves of Europe.

The level of the national the context has also to be taken into account when thinking about the possibility to transmit the knowledge into the Central or Eastern European area. One point of the view is the study of path dependence that influences the constitution of urban policies (Couch et al., 2011), another view is the mere dependence on the development potential that also stems in the economic context and planning decisions (included in the path dependence perspective), but for the purpose of the study can be seen as an isolated factor and its influence on the spatial tools' selection can be examined.

2.2 Urban shrinkage

Cities challenging the demographic projection of population decline usually manifest this fact most acutely on housing estates. The gravity of this state is most noticeable in Eastern Germany and the task how to cope with the loss of population, its ageing, obsolete buildings, decline of economic activity, and the overall reduction of attractiveness represents a key challenge of its urban renewal projects. Considering the fact, that city planning was focused almost exclusively on the process of growth in the past two hundred years (Oswalt, 2004), the ways of the neighborhood alterations had no examples to follow and thus had to evolve unique methods and approaches.

Examining the German examples (26 within the study), the reduction of the empty flats represents the key

instrument (as stated in the Stadtumbau Ost urban renewal program). The spatial tools used are mostly the partial demolition (in the context of the neighborhood meaning the whole buildings) and numerous structural alterations of houses including reduction of floor numbers or distinctive remodeling of the shape of the building (division into smaller sections etc.) (Fig. 2).
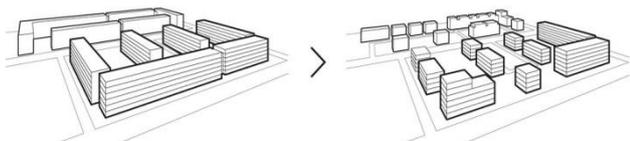

Fig. 2 Decreasing the number of flats and structural alteration of buildings in Neu Zippendorf, Germany. (Source: Author)

The portion of new development (broadening the housing typology or adding amenities) is compared e.g. to France significantly lower (Fig. 1). It is especially shrinking cities where the whole neighborhood has to have its central axis and center defined, so we could distinguish places where the energy should be invested and the edges, where the intensity of building mass can be reduced. Indeed, it is the typical uniformity of Modernist public space, that makes this naturally perceived structure unclear. Articulation of public space and demarking of its hierarchy is a key intervention to make the environment legible and adaptable (Kohout et al., 2016). An illustrative case-study where the central node was demarked as a part of the urban renewal master plan is a Leinefelde South, one of the German leading projects (Fig. 3).

Fig. 3 First master plan of Leinefelde urban renewal project from 1995, definition of central axis and nodes as urban shrinkage strategy. (Source: World habitat award 2007 report)

2.3 Balanced mass

The state of such development potential would normally be represented by a technical modernization of buildings and improvement of public spaces, not so in the context of social and economic decay. Some cases presented in the study have proven this mere 'maintenance' as not viable – e.g., estate Uithoorn in Europarei experienced continuation in the rise of vandalism even after a remarkable modernization of houses and attractive refurbishment of the area (Aparicio L. and Alonso, 2014).

In this context, broadening the housing typology might be considered as an essential tool, so the monoculture of housing and social homogeneity can be replaced by diversity of dwellings and social heterogeneity. The spatial tool of diversification the forms of dwellings is to be found in most of the examined examples across several countries.

In case of limited investments it is the change of the urban layout which is easily obtainable since its spatial articulation lays in a lower scale level – e.g., tree-lined road with adjacent simple square mark the central node, allotments on the edge mark the more marginal character, etc. (Fig. 4). Setting up a new urban layout is beneficial since the division into smaller units and hierarchy of space turn the area into a legible environment, adaptable to prospective changes reflecting all the development potentials (Kohout et al., 2016).
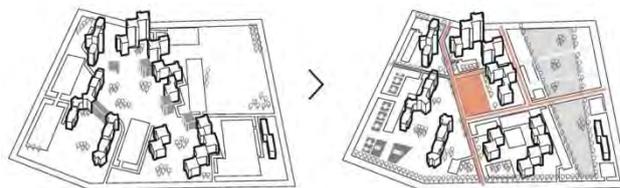

Fig. 4 Setting up a new urban layout in existing ensemble of buildings enables prospective adaptability of urban pattern in balanced-mass situation, Vaulx-en-Velin, France. (Source: Author)

2.4 Densification

The last development potential represents the easily feasible one from the perspective of available tools and sufficient investments. The fact is, that all the vital interventions mentioned above (articulation of public space, division into smaller and legible units, diversification of forms of housing and optimal amenities and other uses distribution) can be in Modernist estates very often well integrated as the examined case-studies prove. New buildings might help to divide the area into smaller, manageable blocks, as well as reinforce the street front and thus help the neighborhood to integrate into the city. Diversification of forms of dwellings (and forms of ownership) strengthens the prospective social stability, consequently, sufficient portion of economically active

population ensures the services and commercial facilities to function in the future and serve to them all.

Among the most illustrative cases of such approach belongs e.g., Poptahof estate in Delft where new urban blocks were created by addition of low-rise buildings or Dover Court Estate regeneration project, where the more complicated original structure of buildings was transformed into traditional one (Fig. 5).
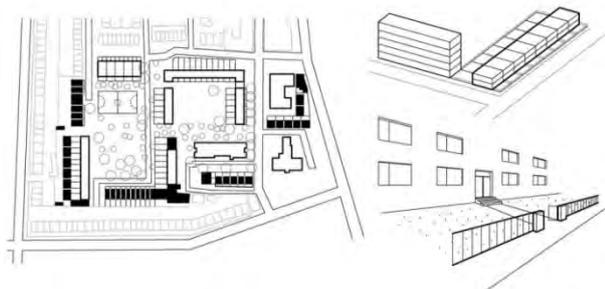

Fig. 5 Densification in Dover Court, London. Addition of new buildings helps to create smaller urban units, simple transformation of public space into semi-private one brings principles of defensible space into the area. (Source: Author)

3 Conclusion

Elaborating an overview of spatial tools used in West-European urban renewal projects, there can be traced some similarities common to French, Dutch and German approaches, while British approaches differ significantly – Modernist estates there are more likely to be completely demolished and the sites are fully redeveloped. Reasons for this distinction are to be part of the subsequent study, so far it might be considered as a consequence of the fact that estates in Britain were mostly built in inner parts of the cities (unlike in the rest of mentioned countries) and thus the renovation was seen as uneconomic (Couch et al., 2011). Even though France does have a lower number of existing-buildings' structural alterations, there can be traced a strong similarity of spatial adjustment approaches among urban renewal projects that worked with existing structure – diversification appears as uniting principle in most of the examined projects. Either, the diversification of dwellings (broadening the housing typology appears in 37 out of 57 relevant cases) , uses (adding amenities can be found in 28 cases), forms of open spaces (private, semi-private, public) or forms of ownership. The same way the biodiversity maintains ecological balance in the nature, the diversity in the field of built environment guarantees its cultural, social and economic stability.

References

Aparicio L. S., Alonso, J. (2014). "Reestructuración de la vivienda social en Holanda: caso Europarei, Uithoorn", Revista De Arquitectura, 19(27), pp. 25–29. https://doi.org/10.5354/0719-5427.2013.33568

Couch, C., Sykes, O., Börstinghaus, W. (2011) "Thirty years of urban regeneration in Britain, Germany and France: The importance of context and path dependency", Progress in Planning. 75 (1), pp.1–52. https://doi.org/10.1016/j.progress.2010.12.001

Kempen, R. van. (2005). "Restructuring large-scale housing estates in Europe". 1st ed., The Policy Press, Bristol, United Kingdom.

Kohout, M., Tichý, D., Tittl, F., Kubánková, J., Doležalová, Š. (2016). Housing Estates, What's Next?, 1st ed., Institute of Building Theory at the Faculty of Architecture CTU, Prague.

Oswalt, P. (2005) "Introduction", Shrinking Cities. 1, pp 12–17.[online] Available at: http://www.shrinkingcities.com/ [Accessed: 14.8.2019]

Roberts, P. (2017) "The Evolution, Definition and Purpose of Urban Regeneration", In: Urban Regeneration: A Handbook, Sage, Los Angeles, USA.

The East Asian City in the First Phase of the Cold War: Influences of the Soviet Discourse, 1940s-50s

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Abstract

This paper examines the Soviet Union approach to architectural and urban practices that appear in foreign city reconstruction and modernization in the 1940s and 50s. Through a study of hitherto untreated archival records, we argue that such major urban projects undertaken by the Soviet government as reconstruction of Moscow or Stalingrad alongside the massive infrastructural projects of early 1950s became a global showcase of an alternative image for the modern city. However different the aesthetics and intrinsic rules of such a city were, it created a number of successful alternatives that helped to sustain social and economic development through the reconstruction and urban modernization of the 1950s, resumed during the same years in Pyongyang, Ulan-Bator and many Chinese cities. This is moreover interesting to observe provided that the social and political implications of city planning and architecture had never yet been as strong as during the first phase of the Cold War.

Keywords

Soviet Union, East Asia, international cooperation, Stalin architecture, post-war reconstruction

1 Introduction

In August 1958, Pierre Vago and Leslie Patrick Abercrombie are in Moscow among the audience of the 5th Congress of the International Union of Architects dedicated to the post-war cities 'construction and reconstruction'. It is the first of such professional gatherings after the War and the fact that the Congress is held in Moscow to revisit at the global situation within the last decade or the two 5-years plans shows the weight of the USSR took in the global politics. By this time, most of the affected by destruction cities had miraculously risen from the ruins and speakers from Soviet Russia, Europe, East Asia and America gathered to share their experience. Some of them are already cooperating with the Soviet specialists and the Soviet approach has a lot of success. Just as Abercrombie implements his plan of London reconstruction in 1944, Stalingrad (Volgograd) has just been rebuilt under its chef architect's supervision, Vasilyii Simbirtsev and many other cities and towns see their revival. It is a stage for the West and the East, especially for the East, to demonstrate their unique thinking. In this paper we take a closer look at main ideas for the new modern city developed in the Soviet Union and what have the Soviet specialists implemented abroad (RGALI Fond

674, 3,1447-1525). The choice of East Asia and Eastern Europe is dictated by the geopolitical condition of the time, where the first proxy-conflicts start between the US and the USSR in Berlin and Korea triggered massive investments into those regions.

Although today some research is emerging on local issues of each country (Strel'bitskaya, 2005; Zhang, 2010; Lu, 2017), the global perspective we want to provide is rather new. In the current context of simultaneous interest and critique in regard of the socialist architectural heritage and city, we seek to focus on fundamental phase of early socialist city development at the beginning of the Cold War in order to reconsider it from an international point of view on the Soviet Union construction practice.

2. Political and ideological premises to the aesthetics

Towards the end of the World War II the international policy of the Soviet Union changed both the World's geopolitical balance and global social climate resulting in the competition of two parallel systems. The confrontation between the East and the West started to grow and was to take place thereupon in the third world countries; taking shape in creation of global institutions to support the international cooperation programmes by each side. The

Fig1. A group of Chinese architects visiting the Research Institute of Civil Construction in Moscow on September 15, 1954 (Source: Photo-chronic of TASS in RGALI Fond 674, Box 3, Files 1311)

Marshal plan and the Warsaw pact become the footsteps of such in Europe during the first post-war decade; and the economic aids to Seoul, Tokyo and Manila — the leverage in opposition to the spread of communism into the East Asia. Joining the UNESCO in 1954 demonstrated the new policy in regard of foreigners nurturing, changing from preparing the underground revolution leaders to highly qualified specialists as a foundation of the Soviet influence with programmes to include both education of future architects and planners in higher eduction institutions of the Union, special technical eduction and short training programmes in-situ to make local counterparts familiar with basic technics needed on the construction sites.

Concerning the economic and physical condition of the recipient countries: North Korea was massively in ruins, China — exhausted by wars and technologically dated, Mongolia — remaining a nomad land with mere sign of urbanization whatsoever. That being said, the necessity of modernization was defined either by the urban and infrastructural breaches made clear by wars or by a new development competition due to the reorientation of global forces. Under such conditions, the international cooperation of the Soviet Union become a singular development tool for these countries in the post-war decade.

Concerning the imagery of the post-war Soviet design, it was largely influenced by the ultimate prototype inherited from the Stalin's motto of the 1930s — "socialist content and national form'' — which coming hegemony was showcased with the architectural competition for the Moscow (Mossoveta) Hotel project of L.Savel'yev, O.Stapran (1934) versus A.Shusev's of 1935. The project of decisive Moscow modernization launched on July 10,

1935 further, according to domestic discourse (Kirillova, 1968), became a major international success against a violent economic crisis in the Western countries (1929-1933) with Moscow city doubling its previous size and reaching 60 hectares with population of 2 million and 2264 square meters of housing built (Kirillova). The project included urban remaking of the city into the *capital* with the Palace of the Soviets in the center (Le Corbusier also participated in the competition), housing developed along the riversides, green belts, sport facilities, central and ward parks development, a canal connecting Moscow river to Volga and the construction of the subway and other big scale infrastructural projects (Dehaan, 2013). Such a capital city along with reconstruction projects in Stalingrad and other cities become exemplar for foreigners and more or less with direct implication of the Soviet specialists was to different extent implemented in North Korea, Mongolia and China that were seeking to become a part of the biggest social utopia on Earth.

Fig 2. Center of Ulan-Bator, 1946 (Source: Maidar)

3. Soviet discourse and the East Asian city

First of all, the very political system needed for reconstruction and modernization was in lack in those countries, hence their first step was adherence to both the ideals and administration model of the Soviets. For instance, they would copy the ministerial and research institutions system and the five-year plan economy. In China, by 1961, all Ministries were obliged to create research institutes to develop typical projects and set a common data-base. The educational system also underwent modification and general universities were split by humanitarian and technical profiles. Later on, over 45 polytechnic universities were created globally with a major support of the Soviet Union.

Since the construction sites needed human resources, people started to be trained to work at new profile

factories or to maintain the new urban networks. Such trainings, for instance, massively took place around 1958-59 in Ulan-Bator exhaustively covering personnel qualifications from eduction and technical training to internships in the organizations of the Ministry of Culture, the Ministry of Eduction, the Ministry of Agriculture of the USSR, etc.

Given the primary shortage of the research base, the Soviet specialists provided the cutting-edge and internationally competitive preliminary research at the first stages of reconstruction. For instance, a delegation of the Union of the Soviet Architects headed by M.S. Sharonov, S.A.Permskii (the head of the Leningrad Committee of Construction and City planning) and others visited China between August 25 and October 9, 1956 to observe the situation in the aftermath of the civil war and the Japanese occupation (RGALI Fond 674, 3, 1346). The research team delivered recommendations for the development of the urban and rural fabric, architecture, infrastructure, professional education and management. The Chinese architectural world was missing many elements of the new post-war development paradigm. In 1950s four cities counted two to four million population (Beijing, Shanghai, Hong Kong, Hangzhou) with 95% of land constructed, Shanghai had little green spaces, Beijing - extremely small yards (less than 1sq. m sometimes) etc. - such conditions could not meet the 'modern' vision of the city, and were considered inappropriate for the city of masses.

Thus the residential areas had been reconsidered throughout the first five-years plan as neighborhoods with apartments, shops, hospitals, kindergartens, schools, cinemas, sport centers, workers clubs and other facilities of total 67 million square meters had been built in major cities or newly developed formerly smaller urban areas from 1951. The range of projects was vast, starting from the residential quarters Cao Yang (1953) in Shanghai to the the layout of the Changchun residential area and the automobile factory. The Soviet typology clearly developed for the communist utopia, introduced to the Chinese city new buildings and gave a new perspective on the previously secondary social classes of workers. The clubs of workers or palaces of youth were developed to back the social eduction of youth, to support the positive spirits of the workers community by providing them with stages for unsophisticated artistic activities, amateur sport meetings, celebrations. Not only such places gave people new places of social interaction but also became stages of the propaganda. Shaping the society through the media and culture was also at the upper level of fundamental

networks in the city. Such was proved by the growth of cinemas and film-making studios. In these years, when radio, newspapers, photography and books were the major source of information, cinema was progressively gaining a place among the reality representation tools. The first film studio was finished in 1956 in Ulan-Bator, 1958 in Pyongyang, the radio house in Beijing in 1955, etc.

In terms of housing, first, the opinion towards mass construction remained negative, as it was in the USSR, yet with the change of the regime in Moscow, the governments realized the shortage of specialists and construction workers capable of dealing with such a number of local projects, the policy quickly changed and brought about the prefabricated housing ideas leaving thus the "socialist in substance and national in form'' concept to the limited number of public and governmental buildings. The construction industry was planned to be gradually changed from partly-precast phase to over-all precasting with 44% of large panel precast buildings to be erected in Pyongyang only. Similarly in China, in many cases the type projects already developed by the Research institutes in Moscow, were to be implemented as such until 1957 for local architects and engineers had to refer to various countries' norms and only from 1956 the government launched a local mass housing programme.

Previously reserved to noblemen and authorities, Asian parks became public and green filter belts appeared sizing 15 sq meters per inhabitant in large towns (only 0,25 in Shanghai in 1954). The belts were to be interconnected into a clear and functional system protecting natural flaws of flora and fauna.

The urban pattern concept was based on the discourse that modern cities must represent the People (commoners, peasants, workers, etc.), serve as a monument of the People's lives and deeds (represent their daily work or lifestyle) and serve the People (accommodate modern human urging for group activities). That being said, in terms of architecture People were meant to inhabit holistic ensembles of the apartment buildings and practice group activities in the courtyards, and of course, they did not need individual houses. A city for them needed vast spaces to hold parades and manifestations, streets to communicate between their residential areas in the center and their working places, sport, culture and recreation facilities. An architecture had to praise the inhabitant, the youth, the worker by accommodating them in *Palaces* (of sport, friendship, etc) along with constantly reminding them of the authorities through pompous architecture or antiquity-inspired urbanist imagery. However, such vision of the city

would give the entire layout and hard regional schemes disabling natural urban modifications, which suggests the denial of social change. More specifically, such regional plan would make allowance for prospective development by 20 to 30 years spans. Such enormous spans were common for the Soviet projects and would naturally fail for either not being accurate or agile.

4. Western counterparts

Interestingly, not only seems this period to show the split of political course between the East and the West but also the taking shape mutual decoherence of architectural thought. While globally, in the East one could observe the strengthening of the "us" concept building around the praise of the public self and rejecting individuality in its center, the West pursued the opposite. Notably, Charles Ascher, a staff member of the US National Resources Board mentioned a "nobler embodiment of the democratic responsibility for the worth of the individual." (Bauman, 1980)" Gradually from 1945 the suburban population of the US grew from 17% in the pre-war period to almost 50% by 1970 and resulted in a complex set of issues related to the post-war migration, racial and class inequalities (Becky and Wiese, 2019). Meanwhile, the suburban areas sprawl in the socialist architectural discourse rearmed banned for another decade.

Generally speaking, the European culture of city planning in the post-war period represented a mixture of diverse domestic or America-tested concepts in many cases very similar to the Soviet approach. Among them are parkways — quintessential to the City Beautiful and reused by Abercrombie for his plan of 1944 or yet the idea of self-sufficient Neighborhood units first appearing in Clarance Perry (1929) Regional Plan of New York and its environs. In this regard, unlike the Soviet pattern, the European plan was more free, connected to the géographie volontaire concept with weaker regional obligations.

5. Conclusion

From a contemporary perspective, the post-war global built environment changes brought about by the Soviet international cooperation happened at many crucial scales and visibly influenced the recipient countries' long-term development. Just as fundamentally, many Soviet concepts such as green belts, or self-sufficient housing unit, etc., were not different from their Western counterparts, they, due to many complex political and other reasons, their implementation with the 'Soviet flavor' was the only way to not only learn about those concepts but also apply them financially and technically.

Alongside the architectural form with the visual focusing on the commoner-oriented doctrine of the 1930s and enforced with the victory celebration concept, we can observe the shift from the individual to mass consciousness in city planning and architecture going on beyond the borders of the USSR and in opposition to the Western concepts. This phase of early socialist city development in the built environment history can be characterized by the first transnational spread of USSR-style nation-state celebration concept taking places in China, North Korea and Mongolia. The end of the Stalin regime in 1953 marked by such concepts, was after 1955 replaced by a sort of Soviet-style modernist architecture partially generated by Khrushchev's mass-architecture and a pervasive anti-Stalin programme aiming, among other things, to fight against excessiveness in architecture.

References

Bauman, J. (1980). Visions of a Post-War City: A Perspective on Urban Planning in Philadelphia and the Nation, 1942-1945. Urbanism Past & Present, 6(1 (11)), 1-11. 1980 Retrieved from http://www.jstor.org/stable/44403606 Dehaan, H D. (2013) Stalinist City Planning, Professionals, Performance, and Power, Toronto : University of Toronto Press, 272, 2013

Becky N., and Wiese, A. "Suburbanization in the United States after 1945." Oxford Research Encyclopedia of American History. April 26, 2017. Oxford University Press,. Date of access 11 Jul. 2019, <https://oxfordre.com/americanhistory/view/10.1093/acrefore/9780199329175.001.0001/acrefore-9780199329175-e-64>

Bronovitskaya, N. "Moscow Architectural Heritage, 1933-1941" [Pamyatniki arkhitektury moskvy 1933-1941 in Russian], Moscow, Iskusstvo-XXI vek, - 13-15, 2015

Kirillova, L. "Sovetskaya arkhitektura za 50 let" Soviet architetcure for the last 50 years, Stroiizdat p 79.

Maidar, D. Arkhitektura i gradostroitelstvo Mongolii [Architecture and urbanism of Mongolia], Moscow, 1971 in The Great Soviet Encyclopedia online : http://bse.sci-lib.com/article113905.html

"On Administration and eduction, 1925 -1930", The Communist University of Working Chinese, Fond 530,Box 1, File 85, Russian State Archive of Social and Political History, Moscow, Russia

"Report by Soviet architects delegated to China" , the Union of the Soviet Architects, Fond 674, Box 3, Folder 1346, Russian State Archive of Art and Literature, Moscow, Russia

"Reports of the 5th Congress of the International Union of Architects", the Union of the Soviet Architects, Fond 674, Box 3, Files 1447-1525, Russian State Archive of Art and Literature, Moscow, Russia

Microarchitecture as a Method of Sustainable Shaping of Urban Public Space

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Abstract

Public space in the cities of post-soviet countries is a subject increasingly recognized by the local authorities that manage it. However, the amount of specific investments associated with it, is disproportionate to the needs. Often also investments in public space focus on investing in the aesthetics of cities – actions without any doubt needed, however insufficient. The current solution to these problems may be microarchitectural interventions. The article presents, based on numerous examples, a tried and tested approach to the design of public spaces in accordance with the principles of sustainable development - rational management of financial and material resources, maximizing social benefits from changes in space, while minimizing negative effects on today and the future. This approach can be applied in many cities struggling with a deficit of such spaces and financial resources for their development, mainly in post-Soviet countries.

Keywords

Public space, sustainable design, low-cost, architecture

1 Introduction

Public space in the cities of post-soviet countries is a subject increasingly recognized by the local authorities that manage it. However, the amount of specific investments associated with it, is disproportionate to the needs. Often also investors are focused on the aesthetics of cities – actions without any doubt needed, however insufficient. The current solution to these problems may be microarchitectural interventions shaping the common and social space – interventions with a low cost, and a high impact on the functioning of the space. In article the author will show examples of realized projects which will show that microarchitecture could be an important tool for renewal of public spaces in post-soviet countries.

In this text the main methodology is research by design. The author is experienced in the implementation of such a projects and few of those projects are used as a reference in this article.

2 The role of public space in the cities

Public space is an important component of the urban structure. It provides residents with a place to spend time together, which contributes to building a community, strengthening relationships, a sense of belonging, also helps in calm and calm down. These features have a big impact on the psychological comfort of city dwellers. As claimed by the well-known American activist Jane Jacobs, they need even the smallest human relationships: "Seemingly unimportant, pointless, accidental contacts that happen to passers-by, are small coins that can increase the wealth of urban community life."

3 The causes of functional problems of public spaces in Post-soviet countries

In today's shaping of public spaces one of the main problems is the lack of financial resources. Management of public spaces are almost completely financed and planned by local authorities. We can of course recognized some differences in EU and non-EU countries but despite EU grants and other co-financing programs still investing in public space is insufficient.

A good example of the revitalization of common space is the Xawery Dunikowski Boulevard in Wrocław. A comprehensive renovation of the zone by the Odra River, completed in April 2016, with a length of less than 800 m, cost about 20 million PLN. This investment has been a success and it is very popular place for locals and tourists. However, it has absorbed enormous financial resources from the city budget and further investments of this type remain in the plans. This shows the scale of expenses in relation to the entire city budget. After spending the

current expenditure, there is not much left for this type of investment.

That shows the situation with which we are dealing today. Wrocław – similarly to many other cities from post–soviet countries is struggling with the deficit of resources (revenue planned in the budget for 2018 is PLN 4,285.5 million, when expenses are PLN 4,482 million). Further cities are catching up with the neglect of previous years (both the times of Polish People's Republic and the "wild capitalism" of the 1990s). Expense the vast majority of funds to meet the basic needs of residents. Such as a public transport, education or housing infrastructure. With such emerging priorities for the coming years, we should look for other solutions that will improve the quality of life in the city, and at the same time fit into budget plans, which will largely correspond to the demands defined in the definition of sustainable development – meeting the needs of the present generation without diminishing opportunities development of future generations. We can not miss the scale of costs in context of needs and benefits for the inhabitants.

4 Micro-architecture in a public space

Small interventions with low cost and high impact on the functioning of space can be a solution to the problems. Microarchitecture are realizations from the borderline of architecture, design, small architecture and spatial planning. These are small-scale, often temporary, objects that do not destroy existing infrastructure but introduce modifications to it. They allow to change the image of a given space in a short time and with a low budget.

Richard Horden wrote about microarchitecture in his article for Detail Magazine: "Microarchitecture […] generates a new focus for innovation in relation to human scale, new applications for the research and development of products and materials. It helps to link architecture more closely with product design and utilizes the space "between" things to create new experiences…"

We meet many examples of this type of implementation all over the world. They are mainly initiatives of residents who felt the need to change the surrounding space. A great illustration of this type of spatial interventions was an exhibition at the American Pavilion at the 13th Architecture Biennale in Venice in 2012. The theme of the *Spontaneous Interventions* exhibition draws attention to the nature of the activities undertaken in space. These are spontaneous, often temporary actions, taken from the bottom-up. They are aimed at quickly and efficiently meeting the needs of the inhabitants and filling it with it's meaning and value. Margaret Crawford (professor at the College of Environmental Design at the University of California, Berkley) said about projects presented on the

exhibition: "Exhibition presents merely a small sampling of the informal, improvisational urban projects that are proliferating around the world today […] These activities represents a movement where […] different kinds of citizens are imagining and trying to create a more humane, just, and creative city. Responding to the excitement and energy they create, observers have attempted to conceptualize implications of these projects."

The good example is Better Block initiative. In 2010 activists Andrew Howard and Jason Roberts transformed a blighted street in Dallas for 24 hours – adding bike lanes, siedewalk cafes, food stalls, and other amenities made out of recycled chip materials. These project demonstrate that obsolete zoning or commerce restrictions often pose obstacles to such things as outdoor seating or music, and they encourage communities to actively participate in the shaping of their own neighborhoods. City officials are now recognizing Better Block as a useful tool for showing potential economic development. During next two years, 32 Better Blocks have been realized across USA by the original team or independent community groups.

Fig. 1 Better Block in Brunswick (Source: http://betterblock.org)

The interventions presented at the American Pavilion (124 completed projects in total) show great opportunities to create bottom-up, low-cost activities as well as their effectiveness in meeting the needs of residents.

5 Minimizing the negative effects

Also in the context of sustainable planning, an important feature of small architectural interventions is their low social and physical harm. If designer / investor made a mistake, it is possible, at a low cost, to make changes or remove them. Usually such an error can be seen only after implementation, during use. Due to the small scale investment, any defects will not bring long-term negative effects on the space and its users. Thanks to that, it will be possible to avoid later corrective actions, and lessons learned from the mistakes will allow better planning of changes in space in the future.

6 Projects of the No Studio as an example of planning public spaces with the principles of sustainable development

A concrete model of solutions shows the activities of the No Studio (architectural firm founded in 2015 by duo of architects and designers – Magdalena Szwajcowska and Michal Majewski). The designers operate on the border of architecture and design. In last few years they have completed projects which show a model of dealing with neglected public spaces in cities.

Ideally illustrating this idea is the implementation of Archi-box 7: Mikroinstalacje from 2015 on the concrete stairs at the Piaskowy Bridge in Wrocław. The installation was made as part of the Lower Silesian Festival of Architecture (DOFA) with the support of the Museum of Architecture in Wroclaw.

As the project's curator – Michal Duda, wrote: "By concentrating activities in such areas [neglected public spaces – author's footnote], we want to draw attention to them and encourage them to use them again. Architectural micro-interventions show that the qualitative change of neglected places, giving them a new character or increasing their functionality are possible with small financials".

The project involved the development of concrete stairs at the Odra riverfront, currently unused, and located in the very center of the city along the very popular pedestrian route (leading from the old town to Ostrów Tumski and Wyspa Słodowa – popular among residents, recreational space). The development of this space consisted in the creation of eight simple elements – sun loungers, distributed over the entire length of the steps. Made of OSB boards and painted with varnish resistant to changing weather conditions. The 120 cm wide loungers allowed free sitting or lying down to two people, the south exposure of the stairs was conducive to spending time on them.

The project, initially planned for two months, was dismantled after two years (due to the destruction of the material). From the observations of the authors and organizers, it appears that both residents and tourists used the installation at any time of the day. The effectiveness of the applied solution has also translated into many publications in Polish and foreign media. The project was completed for approximately 4,000 PLN (excluding the designers' fee).

Sara Tardiff from the magazine "Architectural Digest" notes that such projects should be a role model and supported by decision makers: "... their simple but effective solution was to add vibrant sunbathing half-chairs that make the space more attractive and user-friendly. Not only was the project a much easier undertaking than a larger installation, but it was also low in cost – a lesson to their city in affordable urban planning."

Fig. 2 Smple intervention bringing life to unused space close to the river front (steps used by inhabitants of Breslau before World War II) in Wroclaw, Poland (Source: Michal Majewski)

Another example of microarchitecture is the *Waiting Space* project realized by Studio No in 2016 as part of the DOFA'16 festival. The installation stood at the intersection of Kazimierza Wielkiego and Ruska Streets – a crowded, very popular communication hub and a place where pedestrian routes connect. The object occupied an undeveloped and neglected triangular plot adjacent to the full facade of the tenement house and pavement. The designers' idea was to create a simple staircase-building structure fitting into the unusual shape of the plot. This installation gave passers-by the space to meet, spend a short time with friends or wait for public transport.

Fig. 3 Waiting Space Installation on crowded crossroad in Wroclaw, Poland (Source: Michal Majewski)

The project is made of cheap wood-based boards on a wooden structure (without interfering with the adjoining building), specially protected against weather conditions and permanently fixed to the ground. The total cost of the installation was 16100 PLN and was covered from the DOFA'16 festival funds.

However, this implementation was associated with much larger problems than the project described earlier. The late date of opening the installation (October, 2016 - forced by the opening date of the festival), underestimation of the

negative impact of users (mainly when it comes to littering) as well as procedural problems (issue of charges for land use, protests of the tenement house owners) caused that the project did not worked in this space as good as designers and organizers planned it. The waiting room was dismantled in February 2017. The cost of dismantling was approximately PLN 2,000, and the materials after disassembly were reused by the company that took care of dismantling the installation.

We can see here another important aspect of micro-architecture. After dismantling the installation, the occupied area did not return to its original state of degradation. It was cleaned up, paved and unnecessary infrastructure was removed. An important effect of the project was to draw the attention of authorities to this type of forgotten and neglected spaces and forcing interventions. At the same time, referring to the previously discussed issue, the installation – due to shown errors at various stages of implementation – liquidated the negative effects at low cost and after that the space, in a very short time, has permanently improved its quality.

The final project showing the effects of a balanced approach to the development of space is the installation implemented by the No studio in Vilnius. The Justyniszki district, located on the outskirts of the city, was built in the 1980s. A whole series of public spaces was created in the whole district. Elements made of low-quality concrete, lost their original functions and were not used by the residents of the housing estate, were destroyed and were demolished.

In 2017, the Adam Mickiewicz Institute launched a pilot program of interventions in public space. The first project was carried out in Vilnius. What is important in the context of sustainable planning, the whole process was preceded by study visits, meetings with residents and the authorities of the district. Specific design decisions were made on the basis of many analyzes, interviews and observations of space. Design concepts were consulted with the authorities and residents. The entire process was aimed at minimizing the negative impact of the project. Objects in Vilnius, unlike those described above, have been permanently implemented.

The project involved the development of a non-working concrete fountain and an amphitheater located 500 meters away. In both spaces simple forms have been created, adapted to the space, giving the possibility of multifunctional use - depending on the needs and ages of users. The whole is made of durable materials - steel substructure, wooden terrace boards and sides made of galvanized sheet, powder painted, permanently attached to concrete structures.

The investment absorbed a budget of 48,000 PLN, which in the case of permanent reconstruction and implementation of the project in two locations is an extremely low cost. The projects shows that the space around us can be changed with small steps and minor interventions and the improvement of the given space can surprise with its scale.

7 Conclusion

The described projects present proven and analyzed approach to design in accordance with the principles of sustainability – rational management of finances and materials, maximizing the benefits of changes in space, while minimizing the negative effects on today and the future. This approach can be applied in many cities struggling with a deficit of good quality public space and financial resources for their development.

Fig. 4 Pizza project in Vilnius changed abonded elements of public function to useful space for inhabitants (Source: Michal Majewski)

In conclusion, it should first of all be said that micro-architecture should be limited to individual interventions, but it should be larger than the urban strategy. It is clearly emphasized in the description of the Spontaneous Interventions exhibition (Lang Ho, 2012): "When this small but powerful work reproduces and unites, a fair and balanced city is born, the city of all its communities."

References

Crawford M., "Urban Interventions and the Right to the City", Architect. The Magazine of the American Istitute of Architecutre, August 2012, p. 84

Horden R., "Microarchitecture: Review of the Past, and Future Perspectives", Detail. Zeitschrift fur Architektur + Baudetail, 44. Serie 2014.12, p. 1426

Jacobs J. In: Ossowski J. (2017) "Study of conditions and directions of spatial development in Wrocław", Urząd Miasta Wrocławia, Wrocław

Kaltenbach F., "Microarchitecture – a Recourse for the Future of Cities?", Detail. Zeitschrift fur Architektur + Baudetail, 44. Serie 2014.12, p. 1416

Lang Ho C., Leer van der D., Cramer N., "Spontaneous Interventions: design actions for the common good.", Architect. The Magazine of the American Istitute of Architecutre, August 2012, p. 8

Tardiff S., "6 Architectural Installations That Reimagine Outdoor Spaces", Architectural Digest, 2016, Available at: https://www.architecturaldigest.com/gallery/6-architectural-installations-that-reimagine-outdoor-spaces [Accessed: 27-11-2018]

Phases of Transition – Large Settlements in East Germany

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Abstract

Social, political and economic transitions in East Germany over the past 30 years have had significant impacts on large settlements that led to a shift in both the needs and the evaluation of these estates. In this paper, I will illustrate different transformative approaches and assess how they have evolved over time. The transition period can be divided into several phases. Whereas the restoration of settlements was of central importance during the first phase (BMRBS, 1994), the second phase was marked by demolitions of segments of settlements or entire settlements. The third phase is a process of stabilization, which has only taken place for some settlements and is still underway. In this paper, I will discuss the specifics of these three phases by describing which aspects characterize the phases and investigating the factors that led to shifts between them. I will also discuss the influence of shifts in planning models on the transformation, and I will demonstrate the effects of different funding programs. I will investigate the impact of different measures on the urban morphology, specifically, on the fabric of the open spaces, as these are one of the most prominent characteristics of large settlements.

Keywords

spatial structural transformation, East Germany, spatial identity, phases of transition

1 Introduction

After reunification, the physical condition of the buildings and open spaces in large settlements depended, inter alia, on: the time of construction, the economic condition of the city or area they were affiliated to and their size and position within in the city. Aside from their differences they shared a relatively poor technical condition of the buildings, and relatively simple but abundant open spaces. The need for renovation was common for all of them, however, the transformations didn't follow a linear development but have changed over time.

2.1 First Phase Renovation and Privatization

The first conclusive analysis done after the German reunification concerning the large settlements was the so-called "*Großsiedlungsbericht*" (Large Settlement Report) from 1994. It didn't exclusively address East German settlements but recommendations for improvement focused on them, whereas the west German settlements were often regarded as case studies. A few positive aspects are mentioned concerning the East German settlements – the two main points are their mixed social structure and their generous open spaces – otherwise they are mostly described as problematic but necessary.(BMRBS, 1994, pp. 21, 57–80) Surprisingly, neither of the two aspects were addressed specifically by the funding programs so

their preservation is at risk today. The two main programs funding the needed renovation on a federal level aimed for the urban renewal "Städtebaulichen Weiterentwicklung großer Neubaugebiete" (Urban Development of Large New Housing Areas) and the further development specifically of panel buildings „Städtebauliche Erneuerung in Gebieten der Block- und Plattenbauweise" (Urban Renewal in Block and Prefabricated Construction Areas). The aim of these programs was to sustainably improve the social and cultural infrastructure and the residential environment in the large settlements as well as to implement measures to improve the urban development and traffic network(BMRBS, 1994, p. 23). But only relatively solvent municipalities could participate in the programs as they had to raise one third of the money (Hannemann, 2005, pp. 164–165). Already, these first interventions showed conflicts of interest between the inhabitants for whom it was most important to improve individuals flats whereas the owners – who were able to receive easy funds for it – prioritized the improvement of the open space (Hannemann, 2005, p. 166). Consequently, although some flats were renovated, affluent groups left the settlements for more representative alternatives. The funding programs were extremely centralized and connected to specific demands. As a condition to be relieved of half the mortgage (*Altschuldenhilfegesetz* (Old

Debt Assistance Act)), the owners had to privatize at least 15% of their building inventories. Although privatisation of single housing units in large settlements in East Germany were the exception, the privatisation of larger pieces of the housing stock also had a big impact. Combined with the division of the estates into several cooperatives, the consequences were lasting for the subsequent renovations of the settlements (Grunze, 2017, p. 45). The group of recipients of the funds was highly diverse, leading to various approaches and individual solutions. In one street or one block, the houses and ground were sometimes divided between several owners.

Fig. 1 Only partly renovated building due to fragmented ownership (Source: Nikolas Rogge)

Through later sales of the housing stock, or parts of it, the disparity increased. This patchwork of owners and approaches causes difficulties to develop the settlements up to today. It resulted partly from the wish for differentiated approaches, which again was anchored in the funding programs. Part of their defined goals was to break up the monotonous structures of the settlements and the open spaces (BMRBS, 1994, p. 14), the various transformations often led to fragmented but individualistic neighbourhoods. In the same settlement and even in the same block some houses were renovated while others stayed vacant. Sometimes yards were partially upgraded, where other parts remained untouched. Many yards were restructured, private gardens were given to the ground floor apartments and, additionally, entire yards were closed to the public by fences. The last important systematic change of this period was the emerging shopping centres close to or in almost all large settlements. New supermarkets needed bigger lots with adjacent parking and often served also as shopping centres with a reach far beyond the settlements. Besides the renovation of the large settlements various programs also funded the development and renovation of other types of housing (Göddecke-Stellmann and Wagener, 2010, pp. 747–748) As the level of house ownership was extremely low and the wish for individual housing relatively high, single family houses were subsidized, and the development of new plans was subsidized, both leading to very swift suburbanization. Aside from single-family houses, apartment complexes were also funded. Lastly, huge efforts were made to upgrade and renovate the dilapidated building stock in the historic centers. As all approaches were very successful, the former shortage of housing turned gradually into an oversupply.

2.2 Hidden Changes With Big Impacts

The phase was defined by many hands-on approaches dealing with the dire situation of the settlements. But it can also be read as the capitalistic and individualist approach of the 1990s. The privatization of public and collective goods wasn't limited to the large settlements, but was the common understanding of the time. Still, in an urban structure that was conceived and conducted under a socialist paradigm the consequences of the changes were especially drastic and weakened the original planning ideas. The cumulation of these changes had a big impact on the structure of the settlements. The former omni-space connecting different parts of the settlement was cut up by fences into private courtyards and public streetscapes, therefore, perceived- and experienced-distances grew. The settlement was divided into perceptible sections or quarters, sometimes improving the orientation within, but often losing the understanding of the settlement as a whole. The various renovations of the open spaces improved the living conditions in the settlements. Despite regular monitoring, the measures weren't conclusively evaluated concerning their spatial achievements or shortcomings. Many relevant hard facts were documented but a comprehensive evaluation of the spatial impacts of the various alterations on the settlement is missing. Retrospectively it seems that some qualities of the settlements were already lost during this first phase of transition (Rogge, 2019).
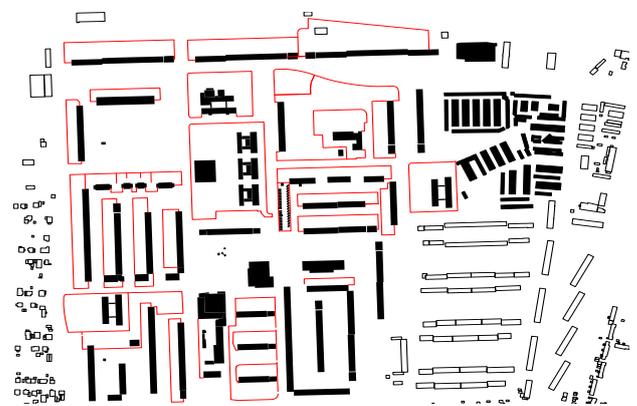

Fig. 2 New boarders in Magdeburg "*Neu Reform*" hindering free movement through the settlement (Source: Nikolas Rogge)

3.1 Second Phase Demolishing and Restructuring

At the end of the 1990s high vacancy concerning entire East German cities and their settlements was imminent, yet big concepts to manage the housing supply on a city level were initially met with criticism since the failures of big planning approaches in West Germany and central planning in East Germany were still very present (BMVBS, 2012, p. 19). The beginning of the second phase is marked by the report of the so-called 'Lehmann-Gruber-Commission' (BBSR, 2001). Although the high vacancies had been known to many experts, this document explicitly named the extent of the problem: millions of apartments in East Germany stood empty. Already the first sentence of the preamble points to the general direction of the report; the solution for the massive problem was seen mainly in the destruction of apartments in the large settlements (BBSR, 2001), although the highest vacancy rates were found in the turn-of-the-century buildings and other houses built before 1918. The slogan "shrinking from outside to the inside" became the principle for almost all cities. It was directed foremost onto the entire city, meaning settlements at the edge were to be demolished first. But it also meant that the settlements were demolished starting from their edges towards the centre. The exceptions were the schools and kindergartens which had supplied the settlements with walkable education opportunities but lay now vacant and were often demolished first. The vacancy was mostly a result of the fast suburbanisation and the renovated city centers, both directly caused by the programs initiated in the 1990s. Against this background, the committee proposed the destruction of at least 400.000 housing units in the large settlements. Nevertheless, programs to fund renovation of houses and even subsidize the construction of single-family units stayed in place as a need for housing alternatives was still predicted. The core funding program of the second phase was the so-called '*Stadtumbau-Ost'*, (Urban-Renewal-East), which was set up in 2002 as a direct answer to the 'Lehmann-Gruber-Commission.' It ran until 2017 when it was combined with the West German partner program and continues to operate. In total, 5,1 billion euros were invested during this period. Its main purpose was to avoid a division of the East German cities in deprived large housing estates, renovated inner cities and suburban one-family estates. Concerning the large settlements, the funds were focused on the demolition of houses and the removal of the remaining technical and social infrastructure but also the revitalization of open spaces, especially the emerging brownfields.
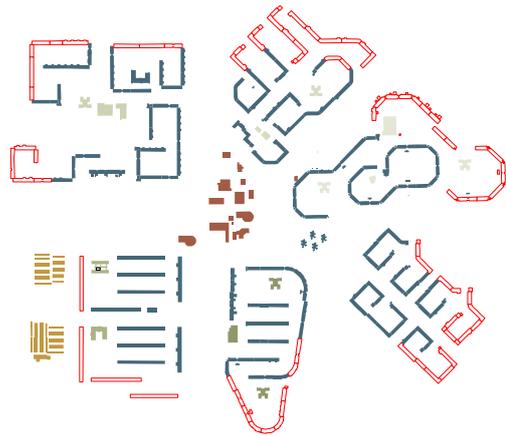

Fig. 3 Illustrating the idealized shrinking from the outside of a settlement (Source: Nikolas Rogge)

Although the upgrading focused generally on the city centers, other funds came from flanking programs that focused on specific parts of the settlements, for example their centers. Others were directed on the users and their wellbeing or focused on important buildings that were deemed worth protecting. Although none of these programs supported the destruction of buildings, they were crucial to manage the process. As requested in the report the ambition to fund holistic projects was common to all programs. To guarantee this, new instruments to manage the shrinkage were developed. So-called integrated development concepts formed the link between economic constraints – both of the owners as well as the municipalities – and the urban planning demands, and were meant to guarantee that the different programs reinforced each other.

3.2 Central Programs Many Restrictions

Despite the good intentions of the programs and concepts, both often fell short of the expected results, firstly because they didn't aim for spatial solutions but stuck to a territorial scale but mostly because their development was too complex and to slow. Consequently, external planners who lacked the local know-how and focused on the demands of the funding programs often realized the major part of the work. For municipalities with little resources and many problems an otherwise unsatisfactory concept was better than none. Furthermore, the matter they were dealing with was difficult and the approaches not unbiased. Few aspects could be adopted from planning growing cities, and many of the houses were burdened with mortgages that eliminated the possibility of their destruction and made the plans inflexible. West German case studies and the unquestioned belief in the superiority of courtyard typologies didn't support a neutral development. Furthermore, apartments on the edge of the

settlements were, due to their favorable location, still occupied by tenants, lowering the likelihood for them to be destroyed. Also, in many cases the owners weren't local anymore and the international funds had no actual interest in developing the housing stock but fixated on short-term monetary gains. Despite all this, the integrated concepts were considered overall successful in managing the transition. Nevertheless, even the governmental report admits their shortcomings in managing spatial constraints and describes the need for more binding commitment for further funding (BMVBS, 2012, p. 24).
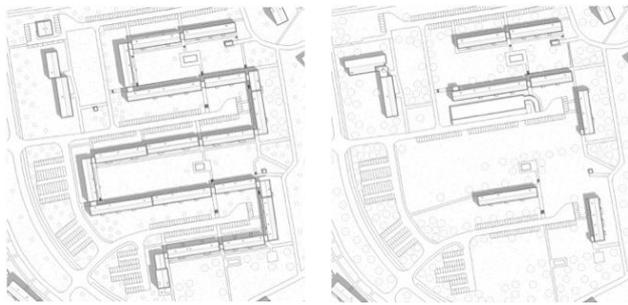

Fig.4 Shrinking in "*Altenburg Nord*" showing the fragmentation and loss of spatial integrity (Source: Nikolas Rogge)

4. Third Phase – Reconsideration and Densification

The third phase is still underway. It has only affected some of the large settlements. Over time, the situation in the different large settlements became more and more diverse, therefore, there is no defined beginning of the third phase of transition. Especially in the metropolitan areas, the shrinkage on a city level has stopped and some settlements are today in high demand and are now being densified (BBSR, 2016). The need for affordable housing arose out of a lack of municipal engagement and privatisation in the past decades in the housing sector. In these settlements spatial considerations are in play again. As tested planning instruments for urban growth are proven to function, they are also applied to the densification of the housing estates and take here, as in all other developments, spatial considerations into account. Yet approaches reflecting the specific morphological characteristics of the existing urban tissue remain the exception. At the same time, in the countless middle-sized cities, shrinking is still the predominant condition. And also here, little has been changed concerning the transformation approaches. Which is not surprising, since the conducted transformations are mostly considered to have been successful – partly because spatial aspects are rarely evaluated. Still, they are not satisfying since – despite the coordinated concepts – fractions of settlements

persist, leaving the remaining inhabitants in unsatisfactory conditions.

5. Spatial Solutions yet to Be Found

The programs supporting the transformation in the different phases can be considered successful if measured by their own goals. Vacancy rates are significantly lower, the overall condition of the settlements is significantly better that in 1990. Houses are often renovated and many open spaces are in relatively good condition. At the same time, the transformation can't be considered successful from a spatial perspective. The lack of focus on spatial configuration resulted at times in perforated settlements and urban fragments without unity. Social cohesion was often lost as the settlements were frequently the only affordable housing in the cities they stood in and the transportations issues are often not resolved. So even after almost 30 years of transition, the spatial challenges related to urban shrinkage aren't solved and concepts for the ongoing challenges still have to be found. The question remains how long it will take until concepts generally value the original qualities of the settlements. Due to upcoming demographic development in an aging society it is foreseeable that shrinking settlements will reoccur. The importance of finding measures to evaluate and to deal with the morphological challenges therefore remains unchanged.

References

BBSR, (Bundesinstitut für Bau-, Stadt-und Raumforschung) (Ed.), 2016. Gemeinsame Evaluierung der Programme Stadtumbau Ost und Stadtumbau West, Forschungen zur deutschen Landeskunde. Selbstverlag der Bundesforschungsanstalt für Landeskunde und Raumordnung, Bonn-Bad Godesberg.

BBSR, (Bundesinstitut für Bau-, Stadt-und Raumforschung) (Ed.), 2001. Wohnungswirtschaftlicher Strukturwandel in den neuen Bundesländern: Bericht der Kommission, Bauforschung. Fraunhofer-IRB-Verl, Stuttgart.

BMRBS, B. für R., Bauwesen und Städtebau (Ed.), 1994. Großsiedlungsbericht. Drucksache 12/8406, Bonn.

BMVBS, (Bundesministerium für Verkehr, Bau und Stadtentwicklung) (Ed.), 2012. 10 Jahre Stadtumbau Ost – Berichte aus der Praxis.

Göddecke-Stellmann, J., Wagener, T., 2010. Die Städtebauförderung – ein wichtiger Begleiter des ostdeutschen Transformations-prozesses. Informationen Zur Raumentwickl. 745–758.

Grunze, N., 2017. Die ostdeutschen Großwohnsiedlungen als Untersuchungsgegenstand, in: Ostdeutsche Großwohnsiedlungen. Springer Fachmedien Wiesbaden, Wiesbaden, pp. 31–47. https://doi.org/10.1007/978-3-658-18540-4_2

Hannemann, C., 2005. Die Platte, 3. Auflage. ed, Industrialisierter Wohnungsbau in der DDR. Schiler, Berlin.

Rogge, N., 2019. Lost identities of transformed urban spaces in east Germany's post- socialist cities. Presented at the Three decades of post-socialist transition, TU prints, TU Darmstadt.

The Challenge of Extending Panel House Loggia at a Neighborhood Level

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Abstract

Neighborhoods of standardized precast panel blocks of flats form a significant part of the housing estate in the Czech Republic. As the comfort requirements have evolved since their construction, the buildings often need to be refurbished to suit the needs of a current user. Extending the loggias or balconies is becoming a rather popular modification. Besides improving the functionality of the apartment layout and helping enliven the outdoor environment of the neighborhood by drawing the inhabitants outside, the extension can also help improve the indoor environment of the apartments, as it decreases the overheating in summer. This type of modification encounters several obstacles, including the matter of ownership, acquiring the building permit and the hygienic demands on the apartments, especially on daylight. Façade renovations are not commonly coordinated within the neighborhood. This article examines the possibilities of extending the loggias in the housing complex Velká Ohrada in Prague, taking into account all the issues mentioned above, which make its realization on the level of an entire neighborhood very difficult, nearly impossible.

Keywords

mass housing, prefabricated houses, loggia extension, indoor environment

1 Introduction

Neighborhoods of standardized precast panel houses form a major part of the post-socialist built heritage in the Czech Republic, with approximately 25% of the population currently living in this type of housing (Temelová et al. 2010). The precast panel building neighborhoods were designed to solve the housing crisis after the World War II and the goal of their construction was to build the maximum amount of apartments while still achieving an acceptable level of user comfort. As the user satisfaction with the comfort level of their apartments has a significant impact on their relationship to the neighborhood (Kutá & Česelský 2017), it is crucial that the apartments maintain their attractiveness for the contemporary user. Therefore, various modifications are made to suit current needs.

One of the aspect in which the apartments in panel houses fail to meet the user needs is the size of the loggia or balcony. Therefore, extending the loggia is becoming a rather popular alteration.

This article discusses the loggia extension from several viewpoints. It outlines the process, including the participants and the legislative conditions. The article also lists the benefits of this modification and possible obstacles that can be encountered.

The possibilities of extending the loggia, the advantages and disadvantages it brings and the challenge of realizing it on a neighborhood level are demonstrated on a specific example of a mass housing neighborhood Velká Ohrada in Prague.

2 Variables in the process of extending the loggias

2.1 Construction options

The construction companies offer a variety of options for enlarging the balconies and loggias. The simplest and cheapest way is to mount the railing (which needs to be dismantled anyway while insulating the façade) in front of the façade instead of inside the loggia, gaining up to 150 mm of space. Another rather inexpensive and structurally undemanding option is a welded metal structure mounted on the loggia, which extends it by 200 mm, compensating for the space taken by thermal insulation.

For small-span construction systems (such as the T06B with a 3.6 meter span), a good option are loggias placed on consoles mounted into the load-bearing structure This revitalization consists of removing suspended steel balconies or dismantling the cantilevered balconies and

replacing them with a brand new structure fixed into the existing wall system of the house.

The large-span construction systems (mostly the VVU ETA with a six-meter span) have loggias comprised in the structure of the building, rather than hanging steel balconies. The options for their extension are either to insert an additional balcony structure on the loggia (extension up to 800 mm) or a self-bearing structure (usually made of prefabricated concrete panels) (Witzany & kolektiv 2016).

2.2 Forms of ownership

City-owned apartments – the entire building (including the ground) is owned by the city (or a city district) and the apartments are rented.

Housing cooperative – the building and the ground is listed in the land registry under the name of the cooperative. Its members buy the rights to be a member of the cooperative and use a particular flat.

Owners association – each apartment is privately owned and its owner is recorded in the land registry. The shared parts of the building and the ground are listed under the names of all the owners with the size of their share. The owners form an owners association.

It is important to note that the exterior (the façade and all its parts) is a shared part of the building. The loggias are not owned by individual proprietors, even though they are only accessible to the owners of the adjoining apartments.

2.3 Building permit

The extension is usually performed along with other refurbishments, such as façade and roof insulation and window and door exchange. These modification do require a building permit, as the external appearance of the building is modified and there is usually some interference into the load bearing construction of the structure.

For the city-owned apartments, the municipality is the developer. For the private owned and co-owned apartments, either the owners association or the housing cooperative is the developer. The individual owners are not direct participants in the building permit proceedings, although a consensus among them must be reached to allow the construction.

If it is only a modernization, reconstruction, building modifications and repairs of the shared parts of the house, which do not change the internal layout of the house and at the same time do not change the size of the co-ownership shares, a 2/3 majority is sufficient to reach the consensus. However, extending the loggias changes the floor area of the buildings, thus usually changing the size of the shares.

Therefore, a 100% consensus among the owners is required.

The owner of the neighboring ground (usually the city) is also a direct participant in the proceedings.

For the building permit, binding assessments are needed from the managers of the technical infrastructure, as well as from the respective authorities protecting the public priorities pursuant to special regulations, some of which are much stricter in the Czech Republic compare to other European countries. The most notable is the hygienic station, which does require an assessment of the impact of the construction on the daylight and insolation in the affected apartments (see 4.3).

2.4 Financing

The reconstruction, building modifications and repairs are primarily financed by the owner of the building. Owners associations and building cooperatives have a repair fund to which the members monthly contribute an amount corresponding to their share of the building. The fund serves also to repay loans taken out by the association or cooperative. It is possible to acquire co-financing from the state, on condition that the refurbishment contributes to the energy efficiency of the building.

3 Benefits of loggia extension

The reason for extending the loggia and its main advantage is enlarging its area, thus improving the functionality of the apartment and raising its market value and general attractiveness of the apartments. The user satisfaction with the comfort level of their apartments has a significant impact on their relationship to the neighborhood, which subsequently improves the image of the neighborhood. Larger balconies also draw the inhabitants to spending more time out there, thus helping enliven the outdoor environment.

The precast panel houses were designed with a functionalist aesthetics and façade composition has been carefully proportioned. However, the renovations do affect the facades quite severely, although this is more significant in the thermal insulation, which changes the ratio of windows to the façade. Comparably, extending the loggia does not change the façade proportions to such extent.

The standard width of the precast panel house loggia is 1200 mm, further diminished by the railing (50 – 100 mm) and after renovation, the thermal insulation (usually 100 – 150 mm). The area required for the residential use of the balcony or loggia is 1400x2500 mm for two people and 1800x2500 mm for four people. Since the two bedroom

apartments are intended for families with children, it would make sense to extend the loggia by at least 800 mm.

An extension by 400 mm still majorly improves the comfort level of the apartments and the width of 1500 mm actually puts the loggias on par with the current residential development.

Perhaps a less obvious benefit of extending the loggia is the decrease in temperatures in summer (Fig.1).
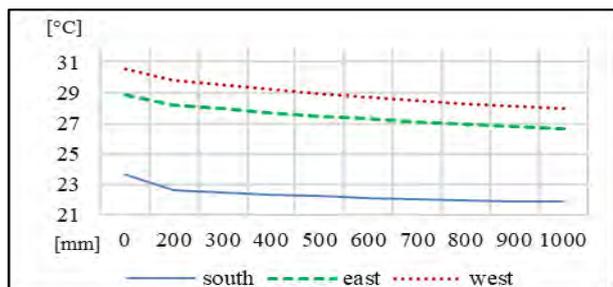

Fig. 1 The maximum indoor temperatures [°] on the 21st of August in apartments that are not located directly under the roof. The southern oriented rooms are already sufficiently shaded by the existing loggias. In the east and west oriented rooms, however, the additional shading provided by the existing loggias can lower the indoor air temperature by up to 3 °C. (Source: Author (Schulzová & Bošová 2019))

4 Possible obstacles to extending the loggia

4.1 Reluctance of the owners

As mentioned in part 2.3, it is necessary to acquire consent from all the members of the owners association or cooperative. Even just one of the inhabitant protesting the extension can hold up the entire process. Some of the reasons for disagreeing include:

•   reduction of the light inside

•   an unequal share of the cost – especially when there is a mix of apartments with and without loggias, either the tenants with no loggias disagree with a modification that does not benefit them directly, or when completely new loggias are proposed, the other tenants refuse to pay for their construction

•   they do not feel they would get a lot of use out of the new loggia

•   they have installed a glazing on the original loggia (this is typically done and payed for individually) and it would have to be removed

If the building has already undergone some renovations that are still viable (such as insulating the façade or repairs of the railing), an additional extension of the loggias stands almost no chance of being approved.

4.2 Acquiring the building permit

The building office usually insists on maintaining a uniform appearance of the façade, so it is not possible to

extend the loggias on just one of the sections, or extend only some of the loggias.

As mentioned above, the ground surrounding the building is normally owned by the city. For loggias mounted on the current structure, the city usually issues a permit for them to extend above the ground. Self-bearing loggias with their own foundations, however, require the developer to purchase of the ground and often also to relocate the technical infrastructure plumbing that runs close to the house.

4.3 Hygienic requirements on the indoor environment

An often unsurmountable obstacle to extending the loggias are the legislative requirements on hygiene. In some apartments, especially the requirements on daylight make even a small extension impossible. The daylight values can be majorly improved by modifying the apartment layout (removing the partition between the kitchen and the living room and replacing the opaque part of the window with clear glazing). However, this alteration is clearly unfeasible in a large number of privately owned apartments.

5 Case study – housing neighborhood Velká Ohrada

This complex was built in the years 1988-1993 as the last mass housing neighborhood of precast panel houses built in Prague. It was originally designed for 13 000 inhabitants and there are currently approximately 11 000 (Němec & Brabec 2015).

Fig. 2 Drone photo of Velká Ohrada (Source: Wikipedia commons)

It consists of nine square-shaped open urban blocks, formed by two buildings of amenities and 29 residential buildings with seven floors (Fig. 2). The buildings are formed by individual sections with a distinct address and a separate vertical communication. The corner sections have five apartments on each floor, the common sections have two or three.   In total, there is 3989 apartments. The majority of them (2955) is a three bedroom (3+1) layout with loggias with an area of 1200 x 5800 mm. There is 1006 one bedroom apartments (2+kk layout) with no loggias or balconies. In the two newest buildings (finished

in 1993), there are 28 apartments with above-standard terraces (which do not require an extension).

5.1 Forms of ownership

The majority of the apartments is privately owned (Fig. 3). Most of the buildings have one owners association for the entire buildings (encompassing several sections). There are however some exceptions, most notably a building with two sections of private owned apartments and three housing cooperation's. One of the buildings in owned by the city.
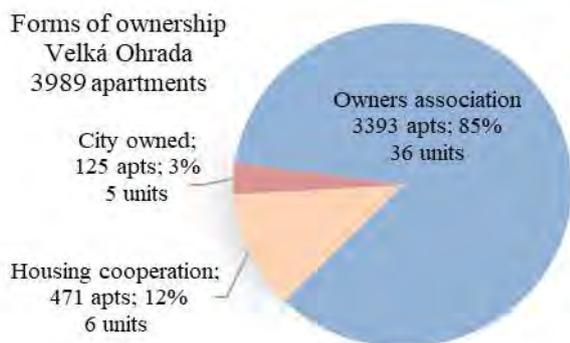

Fig. 3 Forms of apartments ownership in the neighborhood Velká Ohrada (Source: Author acquired the data on the number of apartments and forms of ownership from the land registry).

5.2 Construction options

The complex is built in the standard system VVU ETA with a six-meter span, which is one of the most frequently used systems in the Czech Republic. This allows either for an additional balcony structure inserted on the loggia or a self-bearing structure (see 4.2 for possible problems).

5.3 State of renovations

Although the buildings are relatively new, 14 out of the 29 residential buildings have already undergone major refurbishments, including the façade insulation. It is therefore highly improbable that their owners would invest in extending the loggias before the repairs have reached the end of their viability.
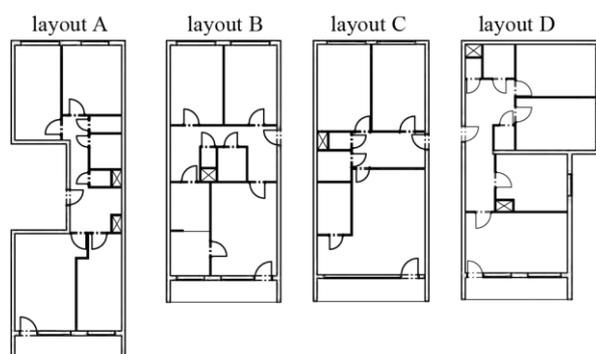
5.4 Indoor environment

Fig. 4 Types of two-bedroom apartments (Source: Author)

The final width of the loggia is limited by the legislative requirements on daylight. There is a mixture of layout A and B (Fig. 4) in most of the buildings. Apartment type A does not allow for any extension without changes in the layout. Type B allows for an extension up to 500 mm. Removing the partition between the living room and the kitchen and replacing the opaque window panel with a clear one would allow for an extension up to 600 mm for both layouts, but this is hardly a realistic possibility in a large number of privately owned apartments.

The types C and D allow an extension over 1000 mm. Type C only appears in the newest buildings that have both undergone a recent façade renovations. Type D only appears in the corner sections (Schulzová & Bošová 2019).

6 Conclusion

The article tried to figure out whether it is realistically possible to extend the loggias of a large precast panel housing complex in Prague. The largest obstacle proved to be the hygienic assessment, followed by the large number of parties that need to reach a consensus and the fact that some of the houses have already been refurbished.

Extending the precast panel house loggias is virtually impossible on a neighborhood level in the current conditions and it is extremely difficult even on one building.

References

Kutá, D., Česelský, J., 2017. "Increasing user comfort of housing facilities blocks of flats in the Czech Republic." AD ALTA: Journal of Interdisciplinary Research, 7(2), pp.108-111. https://doi.org/10.2495/SD150672

Němec, M. & Brabec, T., 2015. "Analýza vývoje sociální struktury velkých pražských sídlišť mezi lety 2001 a 2011." (Analysis of social structure development of large Prague housing estates between years 2001 and 2011), Praha: Institut plánování a rozvoje hlavního města Prahy. (in [Czech])

Schulzová, K. & Bošová, D., 2019. The Impact of Extending the Precast Panel House Loggia on the Indoor Environment. In 19th International Multidisciplinary Scientific GeoConference SGEM 2019. Sofia: 19th International Multidisciplinary Scientific GeoConference SGEM 2019, 30 June - 6 July, 2019, pp. 565-572. htttps://doi.org/10.5593/sgem2019/6.2/S27.072

Temelová, J. et al., 2010. Housing Estates in the Czech Republic after Socialism: Various Trajectories and Inner Differentiation: Various Trajectories and Inner Differentiation. Urban Studies, 48(9), pp.1811-1834. https://doi.org/10.1177/0042098010379279

Witzany, J. et. , 2016. "Metodické a technické pokyny pro rekonstrukce, opravy, popř. výměnu a dodatečné zřizování lodžií a balkonů."(Methodological and technical instructions for reconstructions, repairs, resp. exchange and retrofit of loggias and balconies) Prague: Czech Technical University (in [Czech])

Yerevan City Master Plan Development: Iron Curtain Period (1946-1991) in Regard

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Abstract

The work covers the main steps in the development of Yerevan master plan worked out from 1924 in socialist Armenia. Prominent Armenian architect Alexander Tamanyan settled a ring-road system by creating a new compositional axis with north-south direction, in fact facing the city and its buildings directly towards the Mount Ararat - national symbol of Armenia. Having preserved the historical grid of the existing streets, A. Tamanyan at the same time considered fundamental reconstruction of the old city and its perspective development based on new political, social and economic conditions. The major modifications of Yerevan master plan in post WWII period and the Iron Curtain influence are distinguished in the work. Due to rapid industrialization and increase of population number there emerged a need of Yerevan city urbanization which resulted in boundaries extension in the initial master plan by adding new suburban settlements. Some aspects after the fall of Iron Curtain up to Armenian Modernism are highlighted in the paper with the results of achievements of Armenian architects in the process of modernization of Yerevan city.

Keywords

city, modernization, master plan

1 An ideal city based master plan

As a part of Soviet Union, the capital of the Republic of Armenia, Yerevan, was one of the fast growing cities. Large-scale construction was launched in Armenia, which had been developing at an increasing speed since then. In 1924 the outstanding Armenian architect and academician Alexander Tamanyan, by taking the best forms of foreign garden cities and with personal experience in designing similar plans, undertook the initiative of designing the master plan for Yerevan (Muradyan, 2017). Strongly marked ring-road system was prompted by the peculiarities of the relief passing at the foot of the surrounded three slopes. Thus, following the principles of ideal city, the grid of streets was adopted to the ring-roads and underlined with diagonal rays of streets (Fig. 1). The territory of Yerevan city provided many opportunities for making picturesque perspectives of the city to the Mont Ararat (Бархин, 1975). Thus, the created new compositional north-south axis opened the city and its buildings directly towards the Mount Ararat, in result including it in the composition of the master plan (Fig. 2). This solution expressed the idea of the integrity of Armenia, the reuniting of the lost territories.
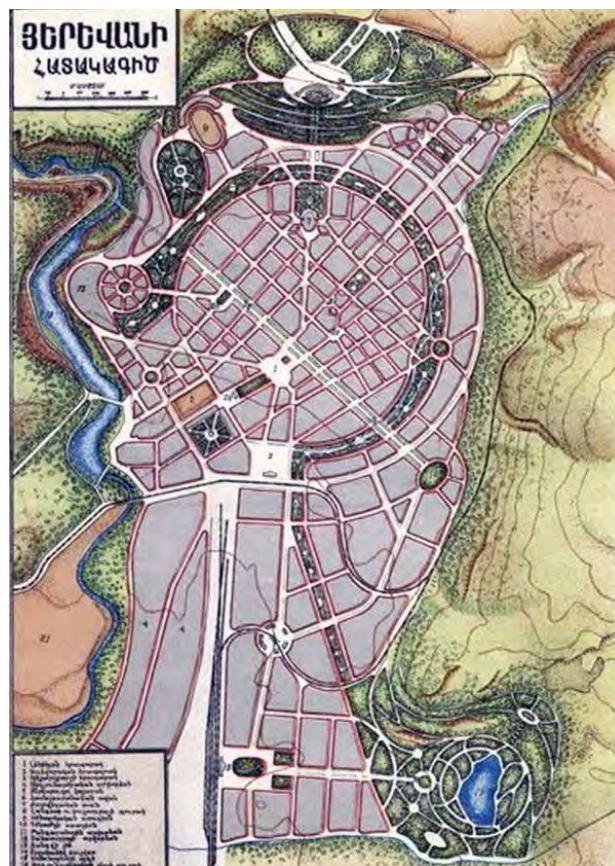

Fig. 1 Yerevan master plan, 1924
(Source: https://gradaranarm.wordpress.com)

So, Mount Ararat together with other dominant buildings of the city is emphasized as one of the main elements of the master plan, in consequence the dream of the people of Armenia came true - the city was opened to Ararat.

Fig. 2 Perspective view to Ararat Mountain
(Source: architect V.G. Bogdanov)

Certainly, A. Tamanyan could foresee radical reconstruction of the old city in future and its perspective development based on new political, social and economic conditions. Nevertheless, already during his lifetime, despite all his protests Tasmanian's most of the valuable fragments of the building developments were destroyed. After his death, the destruction and distortion of the principles of the master plan began. The historical events of WWII and the start of Iron Curtain period in 1946 led to fundamental changes in the urban development of the capital of Armenia. The destruction of the ideal city began, with the process of expanding the territory of the city. The terrible era of Stalinism, distorted Yerevan greatly, it disfigured the spirit of the ideal city and brought these deformations to our days.

2 Post WWII period –politics and architecture

The World War II interrupted the realization of the master plan. Despite the fact that the territory of Armenia did not suffer from military actions, the country restarted the construction activities after the war, the scale of which was enormous. The pressure of the already existing Iron Curtain and Joseph Stalin's regime in 1945 did influenced

badly on the aesthetical aspect of the country. In that isolation the Soviet architects were cut off from the world cultural trends and suffered from the lack of experience exchange. Instead, the Soviet ideological education in all spheres, including architecture, was of great importance. Based on well-known declarations of the Central Committee adopted in 1946-1948, the Party demanded from the workers of Soviet culture a decisive struggle against cosmopolitanism and servile admiration for the decaying culture of the capitalist world, against idealessness, bourgeois nationalism and other hostile influences on the socialist society (Арутюнян и Оганесян, 1955).

Like the whole architecture of the territory of the Soviet Union, the architecture of Armenia also suffered from the consequences of the Iron Curtain and Stalinism. When both in Europe and the United States architecture was getting rid of decorations without any functions, in Soviet Union modernity was abandoned in preference for historical styles-art deco, empire, etc. Stalinist era dictated the leader's personal taste and preferences. The use of arches, moldings, and columns with elaborate capitals that even more emphasized the triumph of the country after the World War II.

By that time the formation of the squares and the construction of the main architectural buildings in Yerevan were completed, however, with some changes, since the master plan of A. Tamanyan was considered by the government too critical. According to new ideologies, it did not follow the requirements of modern city. In result, the master plan of 1924 was expanded, the streets were straightened (Григорян, 2013). Besides, most of the buildings unfortunately were constructed without considering the perspective view towards the city and the Mount Ararat.

3 On the way to modifications

After the World War II the quick development of industry, construction speed, as well as the growth of the population demanded town planning modifications –urbanization of Yerevan. The city turned out to have a tendency to merge with nearby suburban towns and villages. Gradually all the free territories around Yerevan, intended for the development of the master plan, were fully utilized (Арутюнян и Оганесян, 1955).

According to the concepts of A. Tamanyan, the city had to be developed around the already existing areas (Fig. 3).
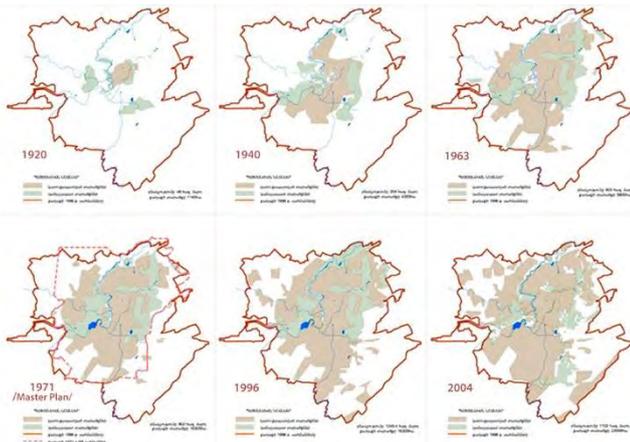
Fig. 3. Scheme of Yerevan development from 1920-2004
(Source: Architect G. N. Musheghyan)

The Iron Curtain in the field of architecture was completely removed with the death of its main causer J. Stalin. Useless fragmentation, excessive complexity, unjustified variety of architectural forms and details indicated a poor artistic taste. The "wasteful" ornament and monumental planning of Stalin era was replaced by industrial typical mass production, announced by the new political leader Nikita Khrushov, whose taste was quite different, opposite with the previous leader.

Fig. 4 Typical housing development in Achapnyak district, Yerevan
(Source: https://www.yaplakal.com/forum2/topic1578132.html)

Architects were made to be focused on simple design and low-cost and high-speed construction. Concrete prefabrication and modular systems of construction were notable outcomes of such changes (Zakevat, 2014). Construction industry had provided a great number of low-cost residential developments mainly carried out by typical projects, forming districts of identical houses (Fig. 4). That meant a tragedy for the professionals in architecture, the loss of their professional values. The new boundaries of the continually extending city were closely connected with Yerevan by their lifestyle and were part of its agglomeration. Finally, the outline of the master plan

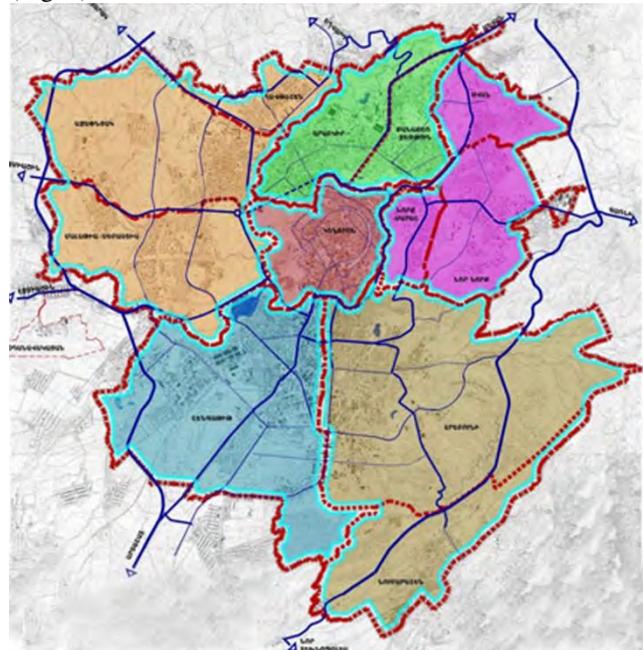began to resemble a flower with petals around its center (Fig. 5).

Fig. 5 Yerevan master plan outline with functional zoning
(Source: Architect G. N. Musheghyan)

There appeared difficulties with installations of some of typical building due to complicated relief in the extended districts of Yerevan. The city was not ready for that type of changes and certainly, there appeared some negative results on the settlement system and the compactness of the urban area.

Consequently, transport and engineering communications were stretched. In some cases, there were compositional inaccuracies and disharmony in accordance with nature and landscape. It was a hard time for town planners and architects. As a result, the inexpressiveness of many residential constructions, the threat of loss of individuality and style and national characteristics, the unsatisfactory quality of mass construction caused fair criticism (Мушегян, 1986).

3.1 Armenian Modernism-success in modification

The main achievement of Armenian architects yet were considered to be separate buildings of Modernism period 1955-1991. It is worth mentioning that the Soviet Armenia had more cultural freedom than other Soviet Republics. Here, far from the center of censor, architecture had been developing much more easily. Compared with the town planning solutions, some separate buildings of Modernism considered to be of special pride in Armenian architecture.

Fig. 6 Sport and concert complex (left),
"Zvartnots" airport, (right), both in Yerevan
Source: Architect Knarik Stepanyan

Sport and concert complex, "Zvartnots" airport in Yerevan and others really became topic of admiration of the style (Fig 6). Many of them face the Mount Ararat, thus following the initially set principle to involve the Mount in the city composition. Today we can witness a picturesque panorama of the city that opens to the Mount Ararat from the Cascade complex which was worked out according to Tamanyan's design (Fig 7).

Lots of structures of Soviet modernism period are included in the of world architecture textbooks and considered to be the main achievements of the Armenian architects.

Fig. 7 View to Mont Ararat from Cascade complex, Yerevan
Source: Architect Knarik Stepanyan

4 Living Yerevan

Summarizing the topic of this paper, it should be defined that the changes of the master plan of Yerevan are enormous. Within the period of time, due to political interference, social and economic factors, it lost some of its components and gained some new specific peculiarities. It is evident that the role of Yerevan city has been increasing together with the development of its society. Definitely the dynamic extension of the capital of Armenia will be continued, since it indicates the level of development of its nation. Its modernization will depend on the life of the new generations based on the social modified environment. The main tasks of the architects is obviously to provide

functional organization of the city territory, and what is still more important, in the searches for new urban planning structures, architects have to keep the character and national identity of Yerevan.

References

Арутюнян, В. М., Оганесян, К. Л., (1955) "Архитектура советской Армении", (Architecture of Soviet Armenia), Издательство Акдемии наук армянской ССР, Ереван, стр. 152-153 (in [Russian])

Бархин, М. Г., (1975) "Александр Ованесович Таманян (1878-1936) "В: Мастера советской архитектуры об архитектуре: Избранные отрывки из писем, статей, выступлений и трактатов", (Alexsander Ovanes Tamanyan (1878-1936), In: Masters of Soviet Architects about Architecture: Selections from the letters, articles, speeches and treatises) Издательство: Искусство, Москва, том 1, стр. 251-252 (in [Russian])

Григорян, М. В., (2013) "Площадь Республики в Ереване. Часть III", (Republic Square in Yerevan. Part III), LiveJournal [online] Available at: https://markgrigorian.livejournal.com/849732 [Accessed: (25.07.2019)]

Мушегян, Г. Н., (1986) "Проблемы большого города", (Problems of the Big City) Промышленность, строительство и архитектура Армении [online] Available at: http://musheghyangurgen.am/arm/publish/detail.php?ELEMENT_ID=539 [Accessed: (25.07.2019)]

Muradyan, Ts. D., (2017) "City of the Sun Planned as a Garden City", The Fabrikzeitung, [online] 01 May. Available at: https://www.fabrikzeitung.ch/city-of-the-sun-planned-as-a-garden-city/#/ [Accessed: (25.07.2019)]

Zakevat, S., (2014) "Becoming a Post-Soviet City: Social Housing and Urban Planning in Yerevan", Ajam Media Collective, 8, April, [online] Available at: https://ajammc.com/2014/04/08/yerevan-becoming-a-post-soviet-city/ [Accessed: (25.07.2019)]

Post-militarised Spaces in Post-Socialist Cities: the case of the military domain in Bitola

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Abstract

In this paper I discuss the particular actors and agencies in the post-socialist cities which attempt to re-use the post-militarized spaces – a process that involves the local urban designers of the late socialist and early transitional generation mostly. In a nutshell, the transformation process of the large scale Cold War military heritage brings particular challenges, due to the dual nature of the military institutions in this period, that is being both 'invisible' and 'omnipresent'. Such double figure comes from the prominence of the restricted access areas designated for exclusive military use and the involvement of the military institutions in multitude aspects of the local civil societies, including the spatial planning itself. The changing role of the military allows for a critical observation of the fundamental shift throughout which 'taskscapes' dissolve – leaving spatial and functional voids as areas where new urban features are eventually produced. In this paper I will present the case study of the military domain in Bitola, a small city in former Yugoslavia. The city has a history of strong military presence, and yet during the socialist period the area of the military domain itself became a secluded area – a situation that continued well into the post-socialist period up until few years ago.

Keywords

military-civil relations, actor-network, post-socialist, post-militarized territories

1 Introduction

My research investigates the large-scale remains of military activities from the Cold War period, with an aim to provide a meta-perspective on the post-militarized spaces and their different developmental trajectories, such as heritage status, re-qualification or destruction. The research is conducted on the evolution of the remains, the discourses concerning their transformation and the relevant heritage policies.

The artefacts of Cold War military spaces are being (re)interpreted in the frameworks of different landscape transformation processes. Each process is a result of negotiations performed within what Latour (2007) refers to as networks, that involve a myriad of actors and agencies, with often conflicting views on the meaning and the significance of the artefacts. My research seeks to identify and describe the role played by the urban designers, their motives and rationales, as well as the planning paradigms and methodologies they adhered to.

To achieve this, I am conducting both an analysis of the available plans, images and policies as well as interviews with the relevant actors. In order to provide a comparative framework, my research looks into examples of transformation of post-militarised areas that have strong relations to (peri)urban tissues and are situated both in the post-socialist as well as in the Western European countries.

In this particular article my intention is to describe the dynamics of transformation in a post-socialist small city. To do so, I will first discuss the observed interlude during which the military domains in the post-socialist countries have experienced a notable decay. This will be followed by a short historical overview of the 'being there' (Woodward, 2004) of the military institutions in the selected case study for this article: the military domain in Bitola, now North Macedonia. In this nowadays small city distinct has a long standing history of spatial patterns being generated by and for the accommodation of the military institutions. Looking at the socialist period, I will elaborate on the dual notion of the military as 'invisible' and 'omnipresent'. Then I will describe the ongoing transformation process of the military domain and finally I will outline some of the particular challenges in the approach of the local urban designers that have been involved in this process.

2 The multiple ends of the Cold War

Not long ago, the perceived end of the Cold War was considered as 'a major historic event that signals the end of the (potentially) destructive hostilities' (Fukuyama, 1992). Meanwhile, a different kind of warfare emerged - notably after the events of '9/11', while the doctrine of the Mutual Assured Destruction remains effective. The military institutions in the Western countries have been continuous transforming beyond the end of the Cold War, for which substantial budgets were available up until the economic crisis of 2009. This allowed for a certain level of maintenance as well as opportunities for 're-qualification of the militarized areas, and introducing heritage protection policies' (Cocroft, 2009).

In the East, the dissolution of the Warsaw Pact, the Soviet Union, and Yugoslavia, followed by the expansion of the NATO pact towards east brought significant changes to the structure and by extent the spatial presence of the military institutions. Both the pre-existing and the newly formed military forces in the post-socialist countries went through a period of economic hardship that eventually resulted in their downsizing. Nowadays, it is only the Russian Federation and to some degree Belarus and Ukraine that maintain a significant military-industrial apparatus.

The transformation process of the military institutions in the post-socialist cities was at first a protracted one, due to the economical transition and in some cases the ongoing armed conflicts. The resulting in-between period of the post-socialist (non)occupancy has mostly resulted in a decomposed 'taskscape' (Ingold, 1993). Namely, cities where the military institutions were provided for a significant number of employments were unable to mitigate the impact on the local economy and by extent the level of services. After the period of 'decay', the neo-liberal policies place pressure on state-owned properties and create a drive for providing 'opportunities' for new development regardless of the shrinking tendencies. In face of this, there is often a lack of professionals as well as urban activists that can raise the overall debate on the future of these sites – which is especially the case in the smaller cities. Moreover, the former secluded nature of the sites makes them 'invisible' for the general population.

3 The (pre)socialist city and the military

It was in the late 19th century that the Ottoman Empire conducted large infrastructural works for its military institutions in Bitola, at the time known as Monastir. The scale of these interventions was in stark contrast with the rest of the urban tissue – yet no material boundary was established between the military grounds and the residential areas. During the WW1 most of the city and the immense barracks were destroyed. The monumental urban renewal plan from 1929 designated the same area for use by the military and proposed ambitious structures. Little came to fruition and overall the city recorded no significant development until the socialist period. (Figure 1)
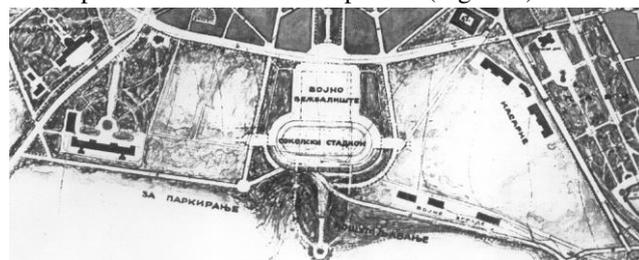

Fig. 1 An extract from the Regulation plan for Bitola from 1929 by Dušan Mirosavljević (Source: Archive of North Macedonia)

The Yugoslav People's Army (JNA) was seen as the constituent force of the Socialist Yugoslavia, part of the ideological trinity of the workers, youth and soldiers. After the WW2, Bitola remained a garrison-city, a distinct functional role that brought in a significant population made up of officers and their families. The importance of the military institutions surpassed that of the local ones, as despite the relative infrastructural growth Bitola could never rise beyond being a provincial centre. In such setting, the JNA maintained a very prominent i.e. 'omnipresent' appearance through various buildings and structures as well as through the social and cultural role played by the Officers' House. Transfers of building or ensembles nevertheless did occur: the old Ottoman military school and the Old Military hospital became a City Museum and a student dormitory respectively. However, given the centralised organisation of the socialist Yugoslavia, the spatial negotiations and the decision making in regard to the military institutions were conducted in secrecy and at higher level of governance.
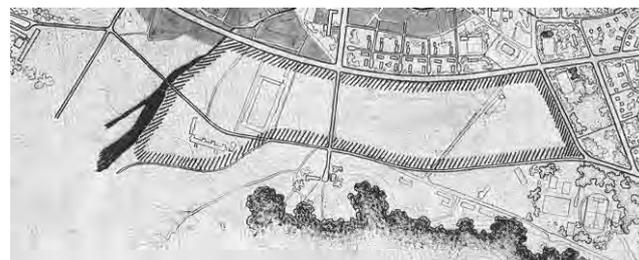

Fig. 2 An extract from the Directional plan for Bitola from 1952 by Vladimir Antolić (Source: personal collection)

Fig. 3 The urban part of the military domain as shown in the Cadastral Survey for Bitola (Source: State Authority for Geodetic Works, analogue cadastral survey, composite from sheets at 1:1000)

4 The enclosure

The gradual enclosure of the military domain in Bitola occurred in the midst of the Cold War period when JNA moved towards an 'Occidental' military model, wherein the military forces tend to be more reliant on professional soldiers as well as to maintain a level of secrecy, i.e. to be 'invisible' (Virilio, 1994). The plan of 1959 already delineated the military area as a separate one, albeit allowing for certain axes to cut through it. (Figure 2) Yet after 1970, a uniform fence was erected along the borders of the domain with the urban areas, running several kilometres in length – which in turn disrupted the relation between the structure of the militarised areas and the surrounding urban tissue. Finally, the overall appearance of the domain was transformed toward a 'campus' model, according to the prevailing urban planning concepts of the time: street patterns with a functional layout and dispersion of building surrounded with abundant vegetation.

In a nutshell, the domain became a highly restricted area while the military still presented itself as the People's Army. Even more, such off-limits status was by no means limited to the perceptions of the general population. The designated area was excluded from the scope of almost every agency that dealt with space and landscape features, the flood protection system perhaps being one sole exemption. No land surveys were conducted, while the zoning plans assigned the area a special status. (Figure 3)

5 The gradual abandonment and decay

The first abandonment of the military domain occurred in the aftermath of Macedonia's independence referendum of 1991 when the retreating units of JNA were given instructions to take as much as possible with them. The Army of Republic of Macedonia (ARM) was hastily formed upon the ruins of the previous military presence – yet its paradigm hardly differed from its predecessor, and

moreover there was no immediate change in the structure of the local authorities or planning regulations. Nevertheless, the effects of the new constellations on the city were multiple: there was a sudden loss of a particular population strata i.e. the officers and their families as well as a reduction in the number of conscripts. Finally, the period of transition to a market oriented economy ensued and the immigration to Skopje, now the capital city of an independent state, as well as to abroad begun to increase.

Following the armed conflict of 2001, the military conscription was abolished and the personnel was gradually reduced. In parallel, a wave of decentralization policies occurred, giving more power to the municipal level authorities. Two most visible effect of the these developments were the transformation of the military HQ into a Town Hall and the fall into decay of the Officers' House. As for the domain itself, entire areas were no more used and the overall maintenance level declined.

5 The new plans

Around 2003, during the procedures for the preparation of the new General Urban Plan (GUP) of Bitola the first push for a transformation of the military domain occurred. It was led by Gjorgi Jovanovski, an engineer and a prominent member of the local council. As the decision making power regarding the militarized areas remained at a higher level, such efforts bore no changes to the GUP and moreover no public or professional debate took off whatsoever. Nevertheless, in 2007 another substantial transfer occurred as the westernmost part of the domain was ceded to the local university.
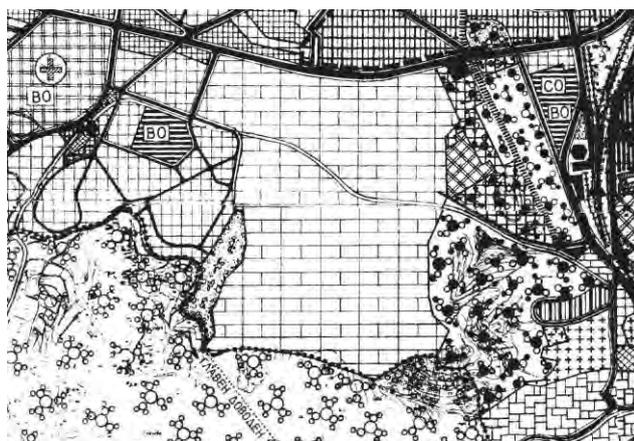

Fig. 4 An extract from the General Urban Plan of Bitola (Source: Second changes to the GUP from 1989 by the Town Planning Institute - Bitola)

Fig. 5 Composite plan of the DUP (Source: DUP ARM 1, 2 and 3 from 2014 by Formi urban planning, composite by the author)

It took until 2015 when the central government decided to offer the areas of the former barracks in several cities for development. Making use of the political alignment, the Ministry of Defence led the process using the 'project' rhetoric, resulting in an overall top-down approach, meaning the municipalities were involved in a limited way. Even though, the chosen sites for transformation differed in size and importance and yet the very same approach was used. Namely, certain buildings which were still fit for use were transferred to the local government and the rest of the terrain was to be divided into lots for sale. For the latter, the Detailed Urban Plan (DUP) was chosen as a tool, as it provides for both plot division and a description of the required infrastructural works. (Figure 4)

However, as the military domains were still assigned as special areas in all the concerned GUPs, and amending them remained a lengthy procedure, the government modified the urban planning law and circumvented the hierarchy of urban plans, allowing to directly proceed towards making a DUP. The plan was delineated by the property limits of the domain meaning there was a rigid border on the proposed transformations, which contributed to actually reinforcing the existing 'border'. Such scope of the plan was in many ways difficult to tackle, both in technical terms but also on conceptual level, as there was no programme brief or any sort of competition whatsoever.

In such circumstances, with the task of preparing the planning documentation came along the responsibility for not only drawing up the conceptual design for the domain but the very program itself. An informal initiative on the later was taken by the biggest local urban design office: Formi, which was then given the overall assignment. The owner of the office, Jorgo Shundovski as well as some of the senior staff at the time represent a direct link to the long-defunct City Planning Bureau, the institution that was in charge of preparing the GUP's in the socialist period

and shortly after. According to Shundovski, his proposal for the programmatic possibilities for the area of the military domain stems from the discussions between the professionals at the Bureau who envisioned a secondary city centre that would take away the pressure from the old city core. In the conducted interview he has insisted that the transformation process will take 'more than a decade'.

In 2011 the entire project was presented to the general public as the 'Golden hill', a small elite city within the city. The local municipality raised a substantial loan in order to build the basic infrastructure and several large apartment blocks are built already, but there are almost no public amenities yet and the entire area could still be described as a large construction site. Finally, only a handful of the pre-existing structures were kept, while a vast amount of the vegetation inside of the domain was lost. (Figure 5)

6 Conclusion

The protracted abandonment of the military domains in the post-socialist cities led to a material decay and was eventually achieved in altered political, economical and urban planning circumstances. Despite the nominal decentralisation efforts, small cities like Bitola seem to have already lost both the tools as well as the human and economical potential to plan their urban development accordingly. As in most post-socialist cities, the vast potential of the former military domains is reduced to an opportunity for acquiring state-owned land. The selected planning tools and regulations do not take into account the size, the inherited structure and the possibilities for (re)establishing continuities with the surrounding urban tissue but rather provide legal and technical details only. Finally, the lack of both public and professional critical voices and creative input is a missed opportunity to enhance the process.

References

Cocroft, W., (2009). Defining the national archaeological character of Cold War remains. In A Fearsome Heritage: Diverse legacies of the Cold War. Left Coast Press, pp. 107–129.

Fukuyama F. (1992). The End of History and the Last Man. Free Press. ISBN 978-0-02-910975-5

Ingold T, (1993). The Temporality of the Landscape, World Archaeology Vol. 25, No. 2, pp. 152-174

Latour B, (2007). Reassembling the Social: An Introduction to Actor-Network-Theory. Oxford: Oxford University Press

Virilio, P., (1994). Bunker Archaeology, New York: Princeton Architectural Press.

Woodward, R., (2004). Military Geographies RGS-IBG., Oxford: Wiley – Blackwell.

Mass Housing Neighbourhoods in Romania Through the Lens of Healthy Urbanism

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Abstract

Usually attributed to social, economic or political factors, the development of new mass housing in Romania can be seen as a chaotic and market-driven phenomenon. This paper proposes a methodology to understand the current urban form of mass housing neighbourhoods developed in the socialist period through the contemporary standards of healthy urbanism. The focus will be on the link between the urban indicators specific to housing districts and the quality of urban life. The aim is to help anticipate future urban regulations that can impact the evolution or the construction of the new housing neighbourhoods in Romania and to obtain possible clarifications and updates of the current norms on residential areas. By studying socialist mass neighbourhoods, we can learn precisely what urban qualities they have and how these can be imposed on new urban developments in order to shift the focus from economic driven development to welfare focused developments. The challenge, while keeping in mind the main principles of healthy urbanism, is to assess how socialist developments fit into these contemporary standards. The next step is to study how the new mass housing projects can, or should, consider the socialist neighbourhoods as possible positive examples. Based on actor-network theory, the study considers the urban environment as composed by multiple urban actors: human and non-human that are tied together through connection and flows. The application of this methodology will involve using digital tools to help compare current urban indicators with the norms posed by healthy urbanism theory and visualise the data generated.

Keywords

mass housing neighbourhoods, healthy-urbanism, actor-network theory, urban indicators

1 Introduction

The city-positivist discourse about the increasing urbanisation of the population is a well-known, overused motto in the commercial, academic and administrative domain. Statistics and numbers aside, the urbanisation process is an ongoing effect of the global liberal market that affects even the most remote regions (Brenner and Schmid, 2015). The spatial reality of the Romanian territory is a complex one: while a large part of the cities is going through a contraction process, there is also a surprising number of expanding urban areas. This uneven spatial development has an impact not only on the urban form of the cities but also on the quality of urban life. It is now common to have a city or district tackling post-industrial population shrinkage and, in the same area, a growing urban development tackling the problems of growth driven by capitalist impulses that ignore the well-being of the residents (Păun Constantinescu, 2019). While we cannot cut ourselves off from the global market, there is a need for solutions that direct and regulate urban

growth to gain more than economic advantages for a small number of investors.

This paper suggests a methodology of studying the link between urban indicators and the quality of urban life for the residents of mass housing districts in Romania. The study is a part of a doctoral research project that aims to develop a set of urban regulations for new Romanian mass-housing developments. By studying socialist housing neighbourhoods, we can understand how standards of healthy urbanism can be applied to the new urban developments. Employing a digital urbanistic analysis, the study will explore, on the one hand, how neighbourhoods developed in the socialist period that comprise dwelling units, theoretically conforming to current housing standards, can be valuable districts in Bucharest and, on the other hand, how housing neighbourhoods that were developed with high living standards failed to provide a sustainably better quality of life. In applying a methodology that is based on actor-network theory, the study considers urban indicators and life quality indicators

as elements that interrelate and generate the urban environment. This kind of interactions are ever-changing and represent a co-functioning in a symbiotic link for the urban actors (McFarlane, 2011). Based on this principle, the study aims to read the interactions between these *urban actors* present in the mass neighbourhoods and to answer the main doctoral research questions:

• What is the link between urban indicators (the percentage of land occupancy, the land use coefficient and the height of the building) and the overall living environment of the area, based on the principles of healthy urbanism?

• Is there a need for a set of stricter regulations for these urban indicators, that will put the citizens' interest above the real estate market?

• What do we define today as necessary facilities for the residential areas, and how does this impact on the quality of urban life in the neighbourhoods?
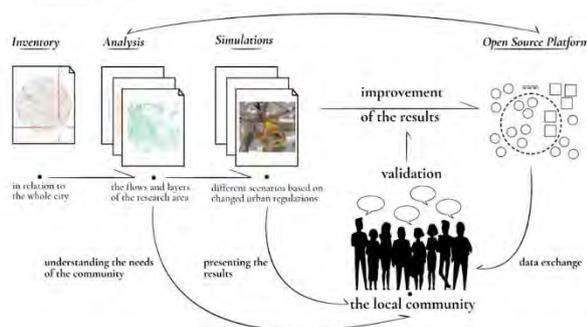

Figure 1. A proposed methodology for information flow

The use of healthy urbanism principles in the research methodology will help in understanding the mass housing socialist neighbourhoods more than just a legacy of a past epoch. The results will be more relevant, keeping in mind the context of an urban network, where a change in an actor can impact the whole system. Introducing urban rules as network actors can help in understanding how changing an urban indicator can impact the urban environment of the residential areas. Another critical aspect this methodology proposes is the open data system of sharing of information. It proves crucial not only for students but also for local administration or any citizen that wants to be a part in designing their city or neighbourhood. Making data available online and easy to comprehend will potentially help citizens in Romania understand and get involved in the city planning process. (*Figure 1*)

2. The Mass-housing districts of Romania: existing studies

Mass housing projects developed in the socialist period, 1944-1989, in Romania have been examined from a variety of points of view. Some studies document the link between architectural design, urban planning and political decision-making and how these relationships influenced the built and unrealised projects. These studies present a critical view on how housing in Romania, evolves based on the political climate. Besides architectural and historical facts, these studies emphasise how the standardised apartment building provided the perfect housing for *the new and equal way of living* aimed at in the communist era. They also highlight the relationship between the quality of the built environment and the *arbitrariness of political interference* (Zahariade, 2011).

Another key aspect that needs to be taken into account is the social characteristics of some of the neighbourhoods. Setting aside the symbolical and political aspect of standardised mass housing, after World War II, Romania experiences a massive housing crisis. By creating and implementing policies that enabled the building of housing districts for social housing, various neighbourhoods were created in Bucharest. (Stroe, 2015)

Even though the standardisation of the socialist housing architecture is frequently criticised, citizens keep living in mass housing neighbourhoods and keep trying to improve their houses. Another direction in the potential study of mass-neighbourhoods is a focus on the refurbishment and improvement of the existing living infrastructure. A series of studies have tackled the elements that need to be upgraded to have a higher quality of life: from the more technical one that focuses on the insulation and improvement of the energy consumption for the existing buildings, to the regeneration or repair of the public spaces belonging to the mass-housing buildings. One key aspect, in this case, is identifying the main problems current neighbourhoods and citizens face, in order to improve the living space. Many citizens and specialists embrace this direction of research. One reason is a sentimental one: despite its frequently bad publicity, in Romania mass-housing living is still a viable solution of inhabiting a city. The residents generally care for their housing units and form a community with their neighbours (Marin and Chelcea, 2018). Aside from the sentimental reasons, there still exists considerable interest in mass neighbourhoods built in the socialist era, with over 40% of the real estate

market composed of apartments sold in these residential areas.

In order to provide a comprehensive inquiry, scientific research on the influence of urbanistic indicators on the quality of life needs to consider the historical and political context in which the chosen neighbourhoods will be studied. This context can then deliver adequate information to answer the main research questions.

3. Can mass-housing districts of Romania be analysed through the *healthy urbanism* framework?

In order to deliver a description of *healthy urbanism*, there needs to be set a broader understanding of the term *healthy*, beyond the nearly medical one. Saracci's definition is linked to happiness, a framework in which quality of life indexes can be connected to healthy urbanism principles. More than focusing solely on the medical or public-health aspects of urban planning, healthy urbanism tackles all the aspects that derive from living in an urban space (Otgaar et al. 2011; Kenzer, 1999). Not accepting that solely economic growth and demographic growth can improve the quality of life, the Healthy Cities Movement, a programme launched in 1986, sets out to create a connection between living conditions and health. The aim is to generate or improve physical and social environments, enabling a higher quality of life for residents (D'Onofrio and Trusiani, 2018).

A perspective method focused more on the role of urban planners was conducted by Future Urban Regions (FUR) in the Netherlands. Their research consists of various research groups focused on an interdisciplinary study of six main themes that revolved around proposals to plan or enhance existing cities in order to create healthy environments (Van den Boomen et al. 2017). The research by design and design by research methodologies proposed by the FUR teams could have a potential in studying and working with the Romanian mass-neighbourhoods. The urbanisation process has come to represent not only the economic and spatial expansion present within cities themselves but to reflect the influence they have at a social, political and cultural level on various, often remote areas and regions (Brenner and Schmid, 2015). Studying the mass neighbourhoods from the socialist period through the lense of these contemporary concepts will help us understand better the way they work as healthy or un-healthy urban developments rather than solely viewing them as results of a long obsolete political regime.

An analysis methodology that considers all networks and substrata could prove comprehensive and far-reaching, allowing specialists to fully understand the processes and the practices produced by a city. They intertwine through the links and the networks created between their actors. Seeing the city as composed by actors and networks will help us understand why and how some mass neighbourhoods work better than others.

4. Reading mass neighbourhoods through actor-network theory

It might seem surprising to many scholars to apply in this aspect some theories that have their origins in the philosophical studies developed in the '70s by Deleuze and Guattari. These theories focused on the assemblage, the rhizome, space (smooth and striated), the state and capitalism, topics that all involve the city and its processes. Actor-Network-Theory is a theoretical and methodological approach that understands the environment as a network of continually shifting links. Based on these theories, we understand that a city is composed of actors, human and non-human, which, through their continuously changing relationships, assemble the urban environment. There does not exist any singular definition of urban assemblage, any more than there exists any single model for applying the theories. The most appropriate, defined by McFarlaine (2011), considers the urban assemblage as a multitude of actors, human and non-human that are linked by different relationships that define the assemblage. These links are symbiotic and not unidirectional, and any modification has an impact on the whole system.

For this research, urban regulations will be considered as actors that come to shape the urban processes. A clear understanding of how urban assemblages work from the actor-network theory could help us understand the narratives and hierarchies that not only influence the built environment but also impact or aspects dealing with the quality of life.

In order to represent and study this network, our methodology proposes using digital tools, such as 3d modelling software and various parametric plugins. These can connect the actors in the 3d models, creating informational models that will present the actors and the networks. Special attention needs to be paid to how the data is collected and processed through these digital tools and how the results generated are interpreted. The ultimate aim of devising urban regulations for new mass housing developments will require an interpretation of the results generated by multiple case studies.

5. Conclusions. Future directions

Mass-housing neighbourhoods can be analysed as urban assemblages, given the multitude of actors and networks that shape them. The proposed methodology focuses on using an analysis that considers the actors which shape the neighbourhoods, and on studying them through the frame of healthy urbanism. The urban indicators become actors, along with the indices that define the quality of life (*Figure 2*). The aim is to understand how they can impact the living conditions in mass-neighbourhood in Romania. The conclusions of this analysis will then be correlated with the goals of healthy urbanism movement.

The future direction of the proposed methodology will be set by a case study of the Floreasca neighbourhood in the North-East of Bucharest, built in the '50s. The neighbourhood is widely considered as one of the most attractive areas of the city. Given the fact that its living units nearly satisfy the basic standards of size, we must ask what other actors influence the quality of life for these neighbourhoods and how they can comply with the goals of healthy urbanism.

Understanding the mass-neighbourhoods developed in the socialist period in Romania from an urbanistic point of view is an urgent task. The aim is to understand why some of them have great qualities of living and how these qualities could be applied to new residential developments.
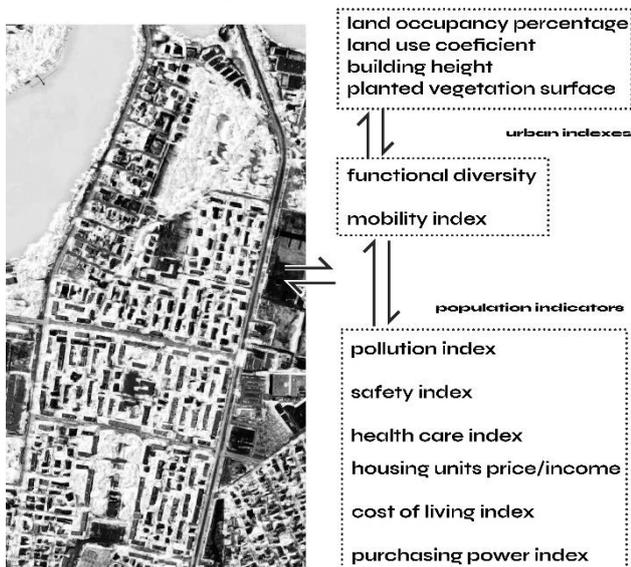

Figure 2. Methodology: indicators and urban form.

References

Brenner, Neil, and Schmid, Christian. "Towards a new epistemology of the urban?" City 19, 2-3 (2015): 151–182.

Van den Boomen, Tijs, Fritjers, Eric, van Assen, Sandra, Broekman, Marco, van Eijck, Guido, Kums, Marieke, Lofvers, Willemijn, Naafs, Saskia, van Spaandonk, Thijs, Steketee, Ady, and Ziegler, Franz. Urban challenges, resilient solutions: Design thinking for the future of urban regions. Haarlem: TrancityxValiz, 2017.

D'Onofrio, Rosalba, and Trusiani, Elio. Urban Planning for Healthy European Cities. Cham: Springer International Publishing, 2018.

Kenzer, Marina "Healthy cities: A guide to the literature "Environment and Urbanization, 11(1), (1999). 201–220. http://journals.sagepub.com/doi/abs/10.1177/095624789901100103 . Accessed July 2019.

Marin, Vera, and Chelcea, Liviu. "The Many (Still) Functional Housing Estates of Bucharest, Romania: A Viable Housing Provider in Europe's Densest Capital City." In Housing Estates in Europe, edited by Daniel Baldwin Hess, Tiit Tammaru and Maarten van Ham. Cham: Springer International Publishing, 2018.

McFarlane, Colin. "Assemblage and critical urbanism." City 15, no. 2 (2011): 204–224.

Otgaar, Alexander H. J., Klijs, Jeroen, and van den Berg, Leo. Towards healthy cities: Comparing conditions for change. Farnham, Burlington, VT: Ashgate Pub, 2011.

Păun Constantinescu, Ilinca ed. Shrinking cities in Romania: Oraşe româneşti în declin. Berlin, Bucureşti: DOM publishers; MNAC, 2019.

Stroe, Miruna. Housing, between Design and Political Decision-making.Romania, 1954-66. Bucureşti: Simetria, 2015.

Zahariade, Ana-Maria. Architecture in the communist project Romania 1944-1989. Bucureşti: Simetria, 2011.

After the Fall: Unclad Modernity on a Four Season Leisurescape

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Abstract

The International Union of Architects (UIA) recognized the modernization of the Lake Balaton by the Abercrombie Award in 1965. Modern buildings in the leisurescape serving seasonal functions are now in increasing danger. The research seeks to find out what problems can be identified in the present processes and what are the factors that cause the devastation? The research outlines the current state of the monuments and aims to establish a draft diagnosis. The examination focuses on the concentrated developments of one-day tourism destinations Tihany and Badacsony. Based on the former analysis of the birth of the heritage at different scales gives the opportunity to compare its origin with the present state by setting up a similar multilevel context of the still standing monuments. After the change of regime, the transforming structure of tourism, privatization and the weakening of institutional powers all contributed to the depreciation of the unprotected heritage. Differences in the social perception of buildings also make it difficult to comprehensively rehabilitate modern heritage in the postsocialist era. Beyond the ideological and institutional context, the main challenge for architects is the seasonal nature of the buildings, which gives the key to the aesthetic values, the formation and structural appearance of the buildings. At the same time, the paper outlines proposals for possible strategies. The purpose of the research is not to answer unique design questions, but to provide a draft framework that can provide a multi-level solution for re-positioning the heritage in interpreting the common vision of the leisurescape.

Keywords

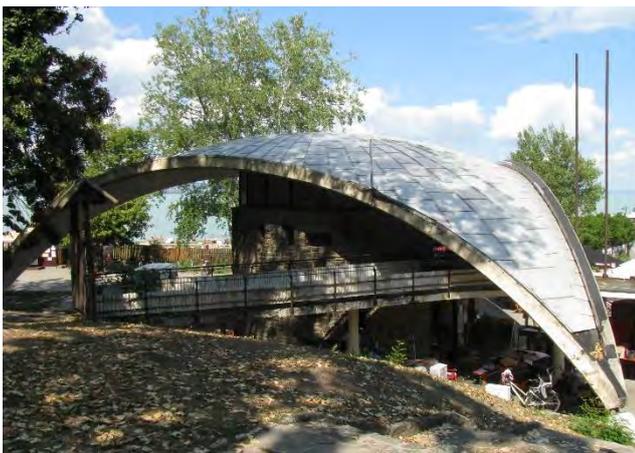Regional Architecture, Scale Transformation, Regional Development, Rehabilitation, Seasonal Structures

Fig. 1 Reinforced concrete shell (2012, Tihany). Photo: the author

1 Introduction

"How to build at Lake Balaton?" – Although the question appeared in many publications of the 20th century has already become history today, but the problem being transformed is still relevant today: „How to rehabilitate the heritage at the Lake Balaton?" In state socialism, special emphasis was placed on people's recreation, and a comprehensive regional development has been launched. Modern buildings of the era have become a characteristic feature of the landscape. The paper focuses on the postsocialist afterlife of the historical period 1957-1968 that was examined in the author's doctoral dissertation. (Wettstein, 2018)

This paper is based on archival research and on-site investigations to demonstrate the recent state of the monuments and the destinations. The status surveys have been made different times to compare the situations. A former report has already been published before the beginning of the rehabilitation project of Tihany. (Wettstein, 2013). Because of the limited space of this publication, this is just a short report from the comprehensive research project investigating the current situation of the heritage and the transformation processes of the postsocialist era.

2 Creation and Valuation of the Regional Heritage

First, contemplate the circumstances of the built heritage in the socialist era. The threefold scale of regional development also provides a good guide for the analysis. The lakeside development started in 1957 integrated the three dimensions of regional planning, settlement development and architecture, which was considered a unique solution in international planning history. (Farkas, 1988) The regional plan defined the landuse, the roles of the settlements, and strictly protected green areas. The second scale level, the settlement development plans further elaborated the regional principles defining the centers and subcenters of the resorts. The third scale, the architectural solutions reflected the original idea of the regional planners by the "adaptive modern" nature of the seasonal functions. According to contemporary interpretation, the structures were put in a "sensitive" way in the landscape. (Polónyi, 1992)

The development was accompanied by international interest. At the last CIAM Conference in 1959, Charles Polónyi, a later Team10 member, presented the first elements of the development in Otterlo. (Newman, 1961) The simple variable prefabricated structure for accommodating seasonal functions could give a possible answer for the questions of the international theoretical thinking. (Pedret, 2011) In 1965, the regional plan received the UIA's Abercrombie Award. The appreciation emphasizes the relationship between architecture and landscape management, highlighted the close-to-nature character of architectural intervention.

3 Seasonal Structures of Tourist Destinations

The development highly focused on the one-day excursion destinations, Tihany and Badacsony, deviated from the general development schemes. Tihany peninsula is famous for its landscape location in the middle of the lake and for the abbey on the hilltop. According to the concept of a regional plan the buildings in Tihany have been designed to serve day-trip tourism, where tourists arriving at the port and they are accommodated by light, seasonal buildings. The other tourist center, the port of Badacsony, known for its vineyards and its spectacular surroundings, was also designed for the one-day trips. According to the plan, the tourists arrived mainly by boat, and after their visit to the mountain cellars, they expected to join the port area waiting for the ships.

Although modern development in the region intended to keep distance from folk architecture formation, the newly built tourism facilities showed the influence of characteristics of local building materials and vernacular architecture, which also reflected the tourism interest. For the first time in the country, the Balaton Highlands received official protection at the county level from the folk architectural heritage. (Simon, 2016) At the same time, modern architects have distanced themselves from the use of vernacular patterns, especially form replicas. According to them: "in the valuable architectural tradition, the pure approach, the aesthetic economy measured to the needs is to be followed, but the humiliating the copy of the appearance, because it reflects the inertness." (Archival Report, 1957) In contrast, the use of local stone material was allowed in vernacular context, solving buildings to be placed in a local environment. In addition to vernacular material inspiration, the topographical features of the volcanic landscape were also reflected in the forms.

In Tihany, near the centralized development is standing the premodern Sport Hotel built in 1923 designed by Virgil Bierbauer. The new buildings are grouped around it following the masterplan. To separate the main road and pedestrian traffic, tourists were led under an elegant reinforced concrete bridge (plan: László Lipták, 1961), and then climbed up the steep road to the abbey. A special post office building was designed as a reinforced concrete shell structure with three basis points by István Bérczes and Béla Szittya. (Fig. 1) The bistro and delicatessen by the young talented architect Zoltán Gulyás was built not far from it and the object-like shape at the foot of the mountain was characterized by a spectacular concrete shielding grid.

Fig. 2 Bazaar in the port area of Badacsony (2011). Photo: the author.

In Badacsony, the outline of the settlement structure and the most important buildings were designed by Ferenc Callmeyer. The first built building in Badacsony was Poharazó (pub), which combines plastic vernacular

architectural elements with a modern design, and it was placed in a row of shops above the area on the hillside slope. In the development of the harbor area, the confectionery Tátika Restaurant was placed as a spectacular landscape element, above the coast line, and then closed the area by a L-shaped bazaar line on the opposite side. (Fig. 2) The designer stressed the seasonal 'simplicity' of the building reflecting the pure forms of the local vernacular tradition, although the expressive formation followed the lightsome horizontal character of the lakeshore topography.

Both of the tourism destinations reflected the seasonal features of recreational architecture and the strategical toolkit of local adaptation. The topographic, vernacular and historical patterns appeared as a conceptual tool for the architects. In these important tourism situations, adaptation has appeared not only at the level of the regional scale average "resort character" (e.g. Polónyi's variable frame structures), but also at the level of the specific local environment in a narrower sense. The general elements of the regional-scale concepts primarily emphasized proximity to nature aimed at the pure functionality tied to unclad seasonality.

4 Rehabilitation Questions of Modern Heritage

„How to rehabilitate the seasonal modernity at the Balaton lakeshore?" - The legacy of the UIA award-winning modern period is not under protection as monuments. All this is related to the ambivalent aesthetic and political perception of the era in public consciousness after the change of regime in 1990. (Ferkai, 2018)

Fig. 3 Bazaar out of function (2011, Badacsony). Photo: the author.

Conceptual turn in tourism: After 1990 a major change happened when seasonal quality hospitality, mainly based on foreign guests, was replaced by four season mass tourism, which has resulted in a change in the function of buildings. The new usages necessitated formal changes in the individual buildings. Polónyi's characteristic beach structures, which plans were exhibited at the last CIAM Congress in Otterlo 1959, are nowhere in their original form today. Lightweight structures have been demolished on the Southern shore like in the main resorts Siófok, Fonyód, or solving the hard commercial needs the structures have been refurbished in a tasteless way. Tourists are less active in using public transport, and shipping is not the primary means of transport. The traffic and tourism tasks of the port of Tihany and Badacsony have also changed.

Institutional deficit: The new Regional Plans does not deal with the architectural design, the monumental protection does not save the modern heritage. The case of the Badacsony port area is a good example of the problems. The Tátika Restaurant that was once elevated above the water, is above the dry shoreline now, because the area in front of the building was filled answering the danger of ice. Due to the fragmented ownership relations after the change of regime, the place of the formerly elegant pastry shop is occupied by a night club. All the details that once defined the character of the building have been lost today.

Structural challenges: The other monument in Badacsony, the L-shaped row of bazaars that closes the area from the west is no longer used today. (Fig. 3) The lightweight reinforced concrete roofing of the building is still in its original form, although one of the building wings was demolished two years ago. It would be worth the renovation of the ensemble, but the isolation for a four season usage would result in thick roof structure that loose the former simple character. The inner space structure is also inappropriate for winter functions.

Rehabilitation strategies: In Tihany mainly the buildings of the ferry port have undergone major transformation, while the buildings in the so-called lower port, although their function has changed, are fortunately showing their original condition. (Fig. 4) The reinforced concrete shell post office is now a four season bistro with isolated wall systems. A comprehensive plan for the development of Tihany was made in 2011, and although the architects paid attention to the sensible rehabilitation of these buildings, the development phase of the development has not been finished. The monuments will be not conserve, but creatively redesigned and supplemented with four season functions, retaining the original character.

5 Conclusion: Reposition the Heritage on the Range of Scales

The construction projects for recreational purposes on Lake Balaton were already discussed on a uniform, regional level since the 1950s. Its general feature is demonstrated by the fact that although the development used some patterns of the landscape at both regional and local level, it was primarily related to the seasonal features. The relaxed environment of the Balaton lakeside represented an experimental territory for the local adaptation of modern architecture, where the clean, simply structured and natural constructions of recreational architecture can also be interpreted as a reconstruction of architectural formation from basic elements.

The former seasonal nature of buildings is a major challenge for designers to find economic ways for rehabilitation. The original structures cannot be used in winter due to the simple functional-space design. The small inner spaces are combined with huge covered but outdoor spaces and the outer boundary walls and roofs are thin structures without isolation. Simple structures are seemingly not suitable for today's four season landscape use.

Year-round use requires a more complex space structure and thick thermal insulation, which would lead to the loss of the lightweight character of recreational architecture.

Saving buildings also requires institutional protection. But beyond conservative preservation, a complex program is needed. As they were born at the beginning of the 1960s as a comprehensive concept at regional level, a unified regional rehabilitation strategy could reposition the monuments in the leisurescape. Following the former three scale level structure of the planning system, a complex three level program should be developed by the involved participants (state, region, counties, settlements, tourism institutions, owners and civic society) to rehabilitate the heritage of the awarded period by the Abercrombie Prize. This complex program should firstly contemplate the network of the heritage on regional level together with the tourism concepts. Secondly the settlements should find its own functional and spatial program that could sustainably contextualize the monuments. And thirdly came the architectural tools of protection.

But institutional protection is not enough in itself; ambivalent social connotations in the politics of the era and modern architecture necessitates the sensitization of the society. The initiatives of new tourism programs, the

activity of grassroots movements and the civic society could make the importance of the heritage understandable. (Wettstein, 2013)

In addition to necessary institutional protection and social sensitization, there is also a need for design creativity to recreate the architectural character this time already in a four season life cycle.

Fig. 4 Reinforced concrete shell after the rehabilitation (2018, Tihany). Photo: the author

References

Farkas, T. "Ahogy én látom a Balaton-ügy 30 évét I. rész" [As I see 30 years of the Balaton case, Part I.], Magyar Építőművészet, (2), pp. 44–47, 1988.

Ferkai, A. "Hatvanas évek. Újabb kísérlet egy korszak bejárására" [The Sixties. A New Approach to the Period], Ars Hungarica (2), pp. 117-134, 2018.

Ferkai, A. "Hungarian Architecture in the Postwar Years". In. Sisa, J., Wiebenson, D. (eds.) The Architecture of Historic Hungary, Mass.: MIT Press, Cambridge, 1998, pp. 275–304.

Moravánszky, Á. "Peripheral Modernism: Charles Polónyi and the Lessons of the Village", Journal of Architecture, 17(3), pp. 333–359, 2012.

Newman, O. „CIAM '59 in Otterlo." Stuttgart: Karl Krämer Verlag, 1961.

Pedret, A. "Team 10: An Archival History." Routledge, London, New York, 2011.

Polónyi, Ch. "An Architect-Planner on the Peripheries: Case Studies from the Less Developed World. The Retrospective Diary of Charles K. Polonyi.", P&C Kiadó, Budapest, 1992.

Simon, M. "Újrakezdések / Restarts - Magyar építészet 1956-1969 és 1990-2010 között - Kritikai írások / Hungarian Architecture 1956-1969 and 1990-2010 – Essays.", Terc, Budapest, 2016. pp. 12-37.

Wettstein D. "A Balaton-part urbánus beépítési formái és a lassú turizmus." [Urban forms on the shore of Lake Balaton and the slow tourism.] In: Konkoly-Gyuró É, Tirászi Á., Nagy G. M. (eds.) Tájtudomány - Tájtervezés. V. Magyar Tájökológiai Konferencia. Nyugat-magyarországi Egyetem Kiadó, Sopron, 2013. pp. 237-242.

Wettstein D. "Regional Strategies in Recreational Architecture along Lake Balaton (1929-1979)" Doctoral Dissertation, Budapest University of Technology and Economics, 2018.

Wrocław's New Market: A Disharmonious Connection of Old and New

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Abstract

The aim of this essay is to present the source of the disharmony between Wrocław's New Market from the Middle Ages and its surroundings - apartment buildings from the 50s. Due to the city's history, destructions during World War II and the idea of designing completely new buildings replacing historical tenement houses in the 1956 by Miastoprojekt, the space started to be a very complex and hard to analyse part of the city. Analysing the features of the medieval market squares, the research is going to prove that the existing buildings around the Market are not characteristic for it. Additionally, analysing Rudolf Arnheim's theories found in "Art and Visual Perception Psychology of the Creative Eye", the Author is going to present the psychological source of perceiving the contradiction between the existing buildings and the Wrocław's New Market.

Keywords

history, modernity, contradiction, Wrocław's New Market, Arnheim

1 Introduction

When is the composition a completed architectural work? How can we define it? Juhani Pallasmaa has written that this is the moment when the author feels relieved and calm. When an observant looks at the Wrocław's New Market for the first time he feels its complexity. The space seems to be clearly defined by the urban walls but this is not the view that people are accustomed to. Every observer feels the proportions. The size of the market is characteristic for the squares designed in the medieval ages. Actually, the history of this place starts in the 13th century. However, after World War II the decision to design completely new, modern mass housing complex, in the place of the destroyed tenement houses, started to complicate its general perception (Figure 1).

Basing on Rudolf Arnheim's theory from "Art and Visual Perception Psychology of the Creative Eye", the paper is going to prove that the connection of the medieval market with the buildings around it, from the 50's, that are not characteristic for it, is the source of the contradiction and disharmony for the observer. The current shape of the market and the features of the buildings will be compared with the typical European medieval market squares.

Fig. 1 Wrocław's New Market nowadays
(Source: https://architektura.muratorplus.pl/zycie-w architekturze/2015/plac-nowy-targ-we-wroclawiu/1353/)

2 Rudolf Arnheim's Theory

Rudolf Arnheim writes in the "Art and Visual Perception Psychology of the Creative Eye" that our past experience has an influence on what we "see" and perceive nowadays. Our current observation is a compilation of our experience, mood, the skill of perception and other factors. It is a fact that, basing on the experiments, Anheim proved that our history and things that we have seen in the past do influence our current perception. One of the best examples is perceiving the corner of the quadrant. Figure 1 contains 4 pictures. When we look at them one by one, from *a* to *d*, we are able to see the corner of the quadrant in the picture *d*. This is caused by the spatiotemporal context of

perceiving the pictures from *a* to *d* and the existence of the whole quadrant in the picture *a*. If we look at the picture *d* without the pictures *a* to *c*, we will not see the corner of the quadrant at *d* but just the composition of the lines.

The perceiving experience is extremely important in analysing architecture because it gives an observant a possibility to understand its complexity.
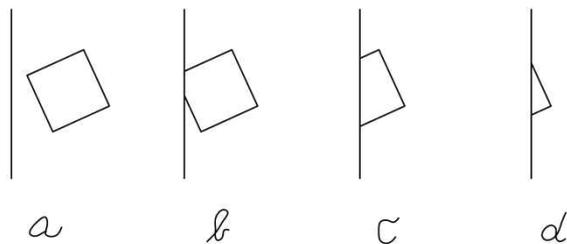

Fig. 2 Seeing the corner of the quadrant in the picture d basing on the experience of seeing 3 pictures (a to c) before.

2 The Medieval Market Squares

2.1 The Shape of the Market

The market squares became very important points on the maps of the cities in the Middle Ages. "The development of the trading market and its trading facilities was a sign of the functional and rational tendencies of the medieval age." (Książek, 1984) That's why they were located at the crossing of the most important roads coming to the cities. The squares became the hearts of the cities where the public life could develop. This process of designing and planning was very characteristic especially for cities from the Central and Western Europe. Some of the best examples of the medieval market squares can be still found in Bremen, Nuremberg and Cracow. Depending on the context, market squares used to have a rectangular shape, often close to the shape of a quadrant. The development of the market squares started from the open area with four streets in the corners and in the final step of the development, they had even twelve streets.

2.2 The Features of the Buildings Around the Markets

In the Middle Ages, the architecture of the buildings around the market squares was deeply connected with the trading function. The ground floors were dedicated for services and shops, whereas apartment rooms could be found on the higher floors. The buildings created the urban walls around the whole markets and each tenement house was built on a separate parcel. The architecture of all the buildings was diversified and the division of the plots was clearly visible in the architecture of these urban walls. Each building had slightly different architecture. Later, due to changes in the architecture styles, some of the buildings

have been rebuilt / redeveloped or got new architectural style (for instance renaissance or baroque).

The features of the buildings were different according to the location, tradition, culture and climate. However, it is possible to choose some general characteristic features that can be found in the majority of historical buildings around the medieval market squares:

- the diversity between the buildings located on the separate plots.
- the domination of the vertical axis in the elevations (axis clearly visible in the location of the windows).
- lack of the repetition between the buildings (usually we are not able to find similar buildings around one market square).

3 Wrocław's New Market

3.1 Brief History

Wroclaw is a historical city founded in 13th century in the western part of Poland. The New Market was built as the first of three primal most important trading squares in the city in about 1214. During the World War II, 80% of the gothic, renaissance and baroque buildings around the square have been destroyed. The problem of choosing reconstruction or designing a completely new architecture was discussed in majority of Polish and European cities after the War. Due to the fact that reconstruction has been chosen as a way of rebuilding the city in the two other historical squares in Wrocław, the city council chose to design a completely new, modern, standardised architecture around the New Market. Nowadays, the Market does not have a trading function anymore.

3.2 The Shape of Wrocław's New Market

The shape of the Market has not changed during the historical damages and renovations. The characteristic medieval rectangular shape from the beginning of the 13th century is still clearly visible in the space. It is about 110m x 135m. 7 streets are located in the corners. Unfortunately, during the damages, it lost its characteristic fountain in the shape of Neptun which was located in the centre of the square. The shelter, which has been organised under the market during World War II, was transformed into underground parking at the beginning of 21st century. The pavement was renovated at the same time.
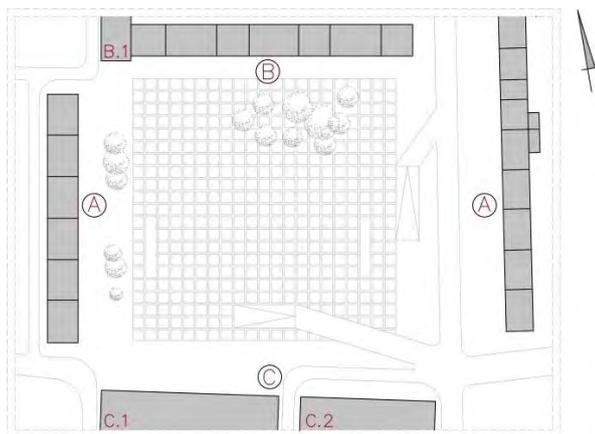
Fig. 3 The Plan of the New Market Nowadays
(Source: Author's Materials)

3.3 The Features of the Buildings around the Market

Only 2 buildings survived World War II damages around the Wrocław's New Market - the tenement house in the north - western corner (Fig. 3 - B.1) and the extension of the Hatzfeld's Palace in the south - western part (Fig.3 - C.1). They have not been changed radically during the modernisation processes in 20th century. After the decision to design completely new mass housing complex in the place of the rest destructed buildings (Fig. 3 - A,B), the "Miastoprojekt" team constisting of Ryszard Natusiewicz, Włodzimierz Czerechowski, Anna Tarnawska and Jerzy Tarnawski has been chosen as the main design team.

The buildings located in the western and eastern part of the market (Fig. 3 - A) are similar. The architects had an idea to create the urban walls using just two building modules. The modules are about 15,0m long. The first module is 6-storey height and the second one 5 storey height. The modules are located alternately (one by one). All the modules have horizontal windows, balconies and characteristic chimneys located asymmetrically on the elevations.

Fig. 4 The Facade of the Building in the Western Part (Fig.3 - A)
(Source:https://www.wroclaw.pl/rozpoczelo-sie-zazielenianie-pawilonow-na-pl-nowy-targ)

The buildings in the northern part of the Market are all very similar (Fig.3 - B). The architects did not diversify them with different height (as it was designed in the eastern and western part) but in the length of the elevations. 2 modules have been designed - about 16,5m long and about 10,0 m long. The modules are located alternately. All the buildings are 5 - storey height. The only characteristic elements of the elevations are windows and loggias. The elevations are the compositions of the quadrant, rectangular windows, porte- fenetre windows and horizontal loggias. Additionally, there is a historical tenement house in the north western part of the urban wall (Fig.3 - B1). This building was not destructed during the War.

Fig. 5 The Facade of the Buildings in the Nouthern Part (Fig.3 - B)
(Source:http://sztuka-architektury.pl/article/10588/zmarla-anna-tarnawska)

The southern elevation of the urban wall (Fig 4 - C) consists of 2 buildings: The extension of Hatzfeld's Palace from 1914- 1918 designed by Karl Lowe (Fig. 4 - C.1) and the new office building designed by Zbigniew Maćków which is under construction (Fig. 4 - C.2). The part of the palace is a 4 - storey building and has a symmetrical elevation with 17 vertical window axis. The characteristic element of the building is a clear classical division of the facade into three parts: the ground floor, the 3 - storey main part and the steep roof with dormers. What is more, the entrance part is marked by a rysalit with a fronton. The new office building is adjusted in scale to the existing palace. The elevation is symmetrical and has 13 vertical axis. The first two floors are marked to imitate one higher ground floor. The elevation is very simple and is decorated by the division of the windows.

Fig. 6 The Facade of the Building in the Southern Part (Fig.3 - C)
(Source: httpsimg.investmap.plimage1512334199_1170x520.jpg)

4 The Comparison between the Typical Medieval Market Squares and Wrocław's New Market

The research shows clearly that the shape of Wrocław's New Market has not changed since it was set in the beginning of 13th century. It still has its characteristic rectangular shape and the buildings are located in four urban walls surrounding it. Unfortunately, the new apartment buildings are not characteristic for the tenement houses located around such European markets. There is little differentiation between buildings located on the separate plots. They are repetitive and there is a domination of horizontal axis instead of vertical in the majority of the buildings. What is more, the Market lost its primal trading and communication function. However, this fact is not deeply connected with locating new apartment buildings. Nowadays, cities do not need trading markets as they needed it in the medieval ages. It is caused by the change in the means of trading as well as the development of air and water transport.

5 Summary - Arnheim's Theory in the Wrocław's New Market's Context

"Every perception experience is set in a spatiotemporal context. The way we see thing is not only influenced by the things we see near in the space but also this, what we have seen in the past." (Arnheim, 1978)

We are used to predict the specific features of the historical markets which are ingrained in our subconscious. Most of the medieval market squares were set on the rectangular plans. The buildings surrounding them have some common repeatable features.

Wroclaw's New Market has been shaped by the historical situations. Although the shape of the square is still representative for medieval markets, nowadays, it is mainly surrounded by mass housing complexes which features are not characteristic for this kind of public space.

According to Rudolf Arnheim's theory of the influence of our experience on the self - consciousness, it is clear that

the source of the contradiction and disharmony, in this case, is in our minds and our custom of predicting completely different kind of architecture around such market squares. Despite this disharmony, historical situation shaped there a piece of unusual architecture.

References

Arnheim, R. (1978) "Art and Visual Perception Psychology of the Creative Eye", Wydawnictwa Artystyczne i Filmowe, Warszawa, Poland, pp. 59-63
ISBN: 978-83-62409-31-0

Cymer, A. (2018) "Architektura w Polsce 1945 - 1989",Centrum Architektury, Narodowy Instytut Architektury i Urbanistyki", Warszawa, Poland
ISBN: 978-87-949185-5-2

Książek, M. (1984) "Materiały Pomocnicze do Studiów w Zakresie Historii Urbanistyki", Politechnika Krakowska, Kraków, Poland, pp. 17-19
ISBN: 8390387808

Wejchert, K. (1984) "Elementy Kompozycji Urbanistycznej", Arkady, Warszawa, Poland
ISBN: 83-213-3151-3

Pallasma, J. (2015) "The Thinking Hand: Existential and Embodied Wisdom in Architecture", Instytut Architektury, Kraków, Poland,
ISBN: 978-83-63786-08-3

Via Nova (2011) "Leksykon Architektury Wrocławia", Via Nova, Poland,
ISBN: 978-83-60544-89-1

Zina W. (1986) "Zabytki Urbanistyki i Architektury w Polsce, Odbudowa i Konserwacja", Volume I Miasta Historyczne, Arkady, Warszawa, Poland, pp. 21,22,583,585,587,590
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