



| DOCONF / 2021 |
| **FACING POST / SOCIALIST** |
| **URBAN HERITAGE** |
| PROCEEDINGS |



FACING POST-SOCIALIST URBAN HERITAGE

8-9th October 2021, Budapest, Hungary

<http://doconf.architect.bme.hu/>

Proceedings of the 4th international doctoral–postdoctoral conference organized by the Department of Urban Planning and Design, Faculty of Architecture, Budapest University of Technology and Economics (BME), and the Foundation for Urban Design, Budapest.

urb/bme

DOCONF/2021

FACING POST/SOCIALIST

URBAN HERITAGE

date /

8-9th October 2021, Budapest, Hungary

venue /

1111 Budapest, Műegyetem rkp. 3, 2nd floor, room 10

organised by /

Department of Urban Planning and Design

Faculty of Architecture / Budapest University of Technology and Economics (BME) / <https://urb.bme.hu/>

and

Foundation for Urban Design, Budapest

opening by /

Melinda BENKŐ, habil. PhD / Chair of the conference series

Associate Professor at the Department of Urban Planning and Design, BME & Head of Standing Committee on Urban Planning and Design, Hungarian Academy of Sciences

Prof. György ALFÖLDI, habil. DLA / Dean of the Faculty of Architecture

Professor of the Department of Urban Planning and Design, BME

Prof. András FERKAI, DSc / Head of the Committee on Architecture, Hungarian Academy of Sciences

Professor emeritus of the Moholy-Nagy Art University, Budapest

36 lectures presented in 6 consecutive sessions /

mass housing / Melinda BENKŐ habil. PhD (BME) / Prof. Richard KLEIN PhD, HDR (ENSAP de Lille) / David TICHÝ habil. PhD (TU Prague)

shrinking cities / Bálint KADÁR PhD (BME) / Prof. Zorica NEDOVIĆ-BUDIĆ PhD (UIChicago, UCDublin) / Angelica STAN habil. PhD (IAUIM Bucharest)

the fifties / Kornélia KISSFAZEKAS PhD (BME) / Endre VÁNYÓLOS DLA (TU, S-HUT Cluj) / Federica VISCONTI PhD (UNINA Naples)

resilience / Árpád SZABÓ DLA (BME) / Daniel KISS PhD (ETH Zürich)

re-collective (with a workshop on Oct 10) / Julianna SZABÓ PhD (BME) / Aleksandra DJUKIĆ PhD (TU Belgrade)

leisurescapes / Domonkos WETTSTEIN PhD (BME) / Prof. Lubica VITKOVA PhD (TU Bratislava)

36 lectures presented by /

doctoral students, candidates, or post-doctoral researchers who are architects, landscape architects, and/or planners arriving from different architectural / planning doctoral schools of 13 countries (Czech Republic, Estonia, Germany, Hungary, Italy, Netherland, Slovakia, Slovenia, Poland, Romania, Russia, Serbia, Spain)

detailed programme /

<http://doconf.architect.bme.hu/>

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

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FOREWORD

The bi-annual DOCONF series provides a comparative overview of current doctoral research in architecture, urban design, urban planning, and landscape architecture focusing on the urban challenges related to the inherited physical – built and natural – environment of post-socialist cities in Central and Eastern Europe (CEE) and post-Soviet Asia. The organizers, the BME Department of Urban Planning and Design and the Foundation for Urban Design wish to promote international cooperation facilitating academic network building for scholars active in these specific fields of research through meeting in person to teach and learn from each other.

DOCONF2021 proposed six thematic sessions: mass housing neighbourhoods, shrinking cities, the Fifties, resilience, re-collective, and leiscapes. Each session was prepared, proofread, and moderated by members of the scientific board, who are university teachers, and in most cases also doctoral supervisors either at the BME Department of Urban Planning and Design, Budapest, at a university in another post-socialist city or in a Western country (see the call of sessions on pages 8-21).

DOCONF2021 featured successive sessions consisting of presentations and discussions. Even though 2021 has been strongly affected by the COVID-19 pandemic, the Chairs, besides the Hungarian faculty of the hosting department, arrived from the Czech Republic, France, Italy, Romania, Serbia, Slovakia, Switzerland, and the USA. The 36 selected speakers, doctoral students, candidates, and post-doctoral researchers (holding a doctorate degree for less than 5 years at the time of the conference) study at various doctoral schools of architecture or planning in thirteen countries.

I believe that the DOCONF conference series is an important step towards learning about each other's research fields, comparing research methods, giving presentations, and writing academic papers published in this open access e-Proceedings.

I would like to thank you all for being active in this year's DOCONF experience, working on (preparing or proofreading) papers, presenting and taking part in the discussions in Budapest, on October 8th and 9th, 2021. And last but not least, I would like to say a big thank you to my colleagues and students at the BME Department of Urban Planning and Design for their contribution to the success of DOCONF2021.

I hope that we continue the DOCONF series, this exceptional international doctoral meeting related to challenges of the post-socialist urban heritage.

<http://doconf.architect.bme.hu/>

See you in 2023!

Budapest, 11th October 2021

Dr. Melinda BENKŐ habil. Ph.D.

Chair of DOCONF series



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Department of Urban Planning and Design, FA-BME, Hu

MASS HOUSING

mass housing neighborhoods




Chairs:

Dr. habil. **Melinda BENKŐ** PhD / Budapest, H
BME Department of Urban Planning and Design / mass housing research platform / European Middle Class Mass Housing

Dr. habil. **David TICHÝ** PhD / Prague, Cz
FA CTU Department of Building Theory / UNIT architekti Architectural Studio / Housing Estates What's Next research platform

Prof. **Richard Klein** PhD, HDR / Lille, F
ENSAP Lille / docomomo France / docomomo international



Throughout the world, mass housing was the answer to access decent living conditions after the Second World War and is still a used built answer to the housing shortage in many countries. Modern and contemporary theory and practice shaping these housing developments seem to be global, but the urban form, architectural characteristics, technical details, ownership system, space division, everyday life, etc. are varied locally. In post-socialist cities, most of the housing estates were publicly owned, centrally planned, built, and managed developments, but after the privatization process their conditions changed and they have a lower ability to integrate current housing requirements. Nevertheless, mass housing neighborhoods represent highly specific areas of cities demanding conceptual and thoughtful public policy decisions regarding their complex sustainability and livability.

Faced with their actual status, the housing needs, aspirations of the inhabitants, or the climate issues and the pandemic situation, what are the possible changes in this urban heritage? How not betray the social and egalitarian ideals which motivate the construction of these neighborhoods? And what challenges lie ahead for mass housing?

The abstract proposal should focus on a relevant theoretical sub-topic, as demolition / renewal, modern / contemporary, shrinking / growing, high-rise / low-rise, density / intensity, sustainability / livability, public / private, whole / part, planned / informal, monofunctional / multifunctional, etc. or/and show comparative study of key locations or/and one case study from a post-socialist city. Criteria for case studies are that at least one example presents post-war (after 1945) mass housing neighborhood from a post-socialist city, with. min 500 dwellings realized in min. two buildings realized for middle and/or lower class. The best knowledge of the types and forms of collective housing must go through all the data enabling these architectures to be characterized: sponsors, designers, companies, urban situations, and development projects, construction techniques, references and influences, receptions, transformations, and critical analysis of contemporary situations.

SHRINKING CITIES

a chance for sustainability and smart transformation in shrinking cities




Chairs:

Dr. **Bálint KÁDÁR** PhD / Budapest, H
[BME Department of Urban Planning and Design](#) / [DANURB+](#) / [ResearchGate](#)

Dr. habil. **Angelica STAN** PhD / Bucharest, Ro
[UAUIM Department of Landscape and Urban Planning](#) / [ResearchGate](#) / [LinkedIn](#)

Prof. **Zorica NEDOVIĆ-BUDIĆ** PhD / Chicago, IL & Dublin, Irl
[UIC CUPPA](#) / [ResearchGate](#) / [LinkedIn](#)



One of the paradoxes of globalization has been the polarization of urban environments: on one hand, the world's growing population concentrates in large cities; on the other hand, smaller cities and towns have experienced a demographic decline and labor migration. Consequently, shrinking cities are facing an accelerated spatio-social and cultural deterioration. In the paradigm of growth and accumulation, the chances to recover from shrinkage are small, as the affected cities are involved in a vicious cycle of regression and loss of attractiveness and capacity to recover.

Very strong recovery projects and policies are needed. The successful examples implemented so far (Oswalt and Rieniets 2007, Hollander, 2009) demonstrate that capitalizing on decline to set aside land for recreation, agriculture, green infrastructure, and other non-traditional land uses will enable shrinking cities „to reinvent themselves as more productive, sustainable, and ecologically sound places” (Hollander, 2009).

The pandemic of 2020, has triggered a new urban dynamic. Large cities suddenly have become vulnerable and fragile because of their density and centrality, losing their attractiveness. Attention has turned to the neglected and chaotic peripheries of the big metropolises and to the small, isolated and sparsely populated towns. These declining places are suddenly seen in another light, re-opening the discussion about the need for deeper changes in urban life and the chance to re-invent these places by a different approach to resources and opportunities.

With the above premises, we invite contributions to address the following topics in a Central and Eastern European context:

- examples of successfully integrated strategies for shrinking cities,
- unique characteristics of shrinking cities by region or historical circumstances,
- matching of planning actions and the types and / or causes of shrinkage,
- adaptive re-use of abandoned/declining infrastructures and venues in shrinking cities,
- case studies of projects building on values associated with peripheral or shrinking places,
- opportunities and trends in shrinking cities induced by post-pandemic adjustments..

THE FIFTIES

'socialist in the content'? 'national in the form'?




Chairs:

Dr. **Kornélia KISSFAZEKAS** PhD / Budapest, H
BME Department of Urban Planning and Design / [LinkedIn](#)

Dr. **Endre VÁNYOLOS** DLA / Cluj, Ro
Sapientia Faculty of Technical and Human Sciences

Dr. **Federica VISCONTI** PhD / Naples, I
UNINA Department of Architecture



The state socialism after World War II, can be divided into marked sub-periods of which the '50s is perhaps the most controversial one. Maybe this decade saw the biggest contrast between the common belief in the need for social changes and the political will disguised by dictatorial demagoguery. In this context, the role of the architects was interpreted more broadly by contemporary political leaders. They were convinced that the designers could influence social mentality, by creating the 'life-frame' of the new society.

1952: G.M.Orlov, a Stalin-award-winning Soviet architect, visited Budapest to help Hungarian architects formulate the new urban planning and architecture according to the social-political order versus 'cosmopolitan modernist ideology'. The instructions were as a summary of the political expectations, which included guidelines such as the transition to collective work, the widespread use of standardized designs, mass housing construction, the awareness of the urban significance of new public buildings, the roles of the new urban spaces and streets, the importance of the silhouette effects in the urban design; professional tasks related to the introduction of socialist realism. Presumably in every country of the Eastern Bloc was a "Comrade Orlov" who mediated Soviet directives amicably and oversaw its implementation. However, the transposition of centrally formulated ideas into local practice can show differences.

The main topic of the session is to formulate the contradictions of the 1950s, among others:

- soviet directives versus local tendencies;
- professional commitment to individual architecture versus the politically expected direction;
- among noble ideas, such as equal opportunities, housing as a fundamental right for the wider strata, and consequently the relationship between mass housing and quality;
- to deny modernism and to formulate new stylistic features in contrast to the formal features of socialist realism.

The aim of the session is to objectively evaluate the urban architecture and architectural events of the decade, to analyze the relationship between the idea and reality, paying attention to their current context.

RESILIENCE

how resilient can cities really be?




Chairs:

Dr. **Árpád SZABÓ DLA** / Budapest, H
BME Department of Urban Planning and Design / CZSZ studio

Dr. habil. **Maciej LASOCKI** PhD / Warsaw, Pl
WUT Chair of Urban Design and Country Landscape / WUT studies in English

Dr. **Dániel KISS** PhD / Zurich & Basel, Ch
ETHZ Network City Landscape / XM Architekten



Our exposure to the new coronavirus reminds us how fragile the normality of everyday urban life can be in states of crisis. Cities and their subsystems—such as their infrastructures, public spaces, and housing—are increasingly becoming subject to systemic disturbances. Be these induced by disease outbreaks, global warming, economic emergencies, or socio-political tensions, an important question to ask remains, how urban systems perform in weathering these disruptions.

With response to the current pandemic, the hosts of this panel suggest inquiries into the post-socialist city's resilience, with particular regard to its public spaces' ability to accommodate and continue to function in the face of disruptions. We do so keeping in mind that the very genesis of post-socialist urbanization is also associated with an elemental shock, namely with the shift from party-state systems to market economies.

Within this context, we would especially like to focus on the consequences of Eastern European and post-Soviet urban renewal practices of the past decades. We are interested in the diversity, vitality, adaptability, and appropriability of the resulting urban spaces and, thus, how different redevelopment models determine the future resilience of cities.

This panel invites papers in one of the following themes:

- regional and global contextualization of post-socialist urban transformation;
- investigation of socialist and post-socialist models of urban renewal;
- East-West comparisons concerning renewal practices;
- studies into the resilience of cities and their subsystems (e.g. public space, housing, public and commercial services);
- foresights of post-pandemic urban recovery investigated in the context of urban resilience.

We welcome all kinds of methodological approaches, ranging from historiographies, single case studies, and comparative analyses, to project-based theses, participatory observations, field researches, and all other qualitative and quantitative methods.

RE-COLLECTIVE


new collective experiences in the central and eastern european housing sector



Chairs:

Dr. **Julianna SZABÓ** PhD / Budapest, H
[BME Department of Urban Planning and Design](#) / [Cohousing Budapest Association](#) / [E-Co-Housing](#)

Dr. habil. **Aleksandra DJUKIĆ** PhD / Belgrade, Sr
[UNI-BE Department of Urbanism](#) / [LinkedIn](#) / [Researchgate](#)



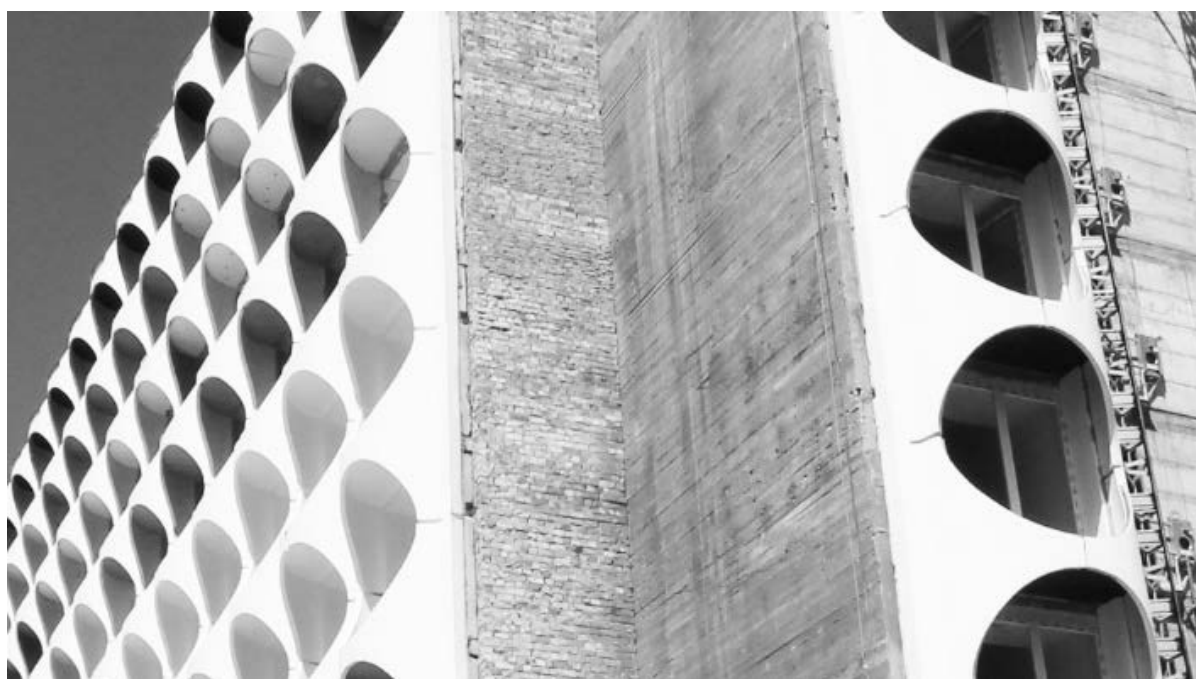
As a result of (re)privatization of the housing stock, the growth of social disparities, and the one-sided housing policies, a distorted housing market has developed in most of the cities in the post-socialist countries, generating problems in affordability, mobility, sustainability, etc. Community housing initiatives could be a solution to these issues in many aspects. Despite their low proportion on the housing market in Western Europe, many researchers see community housing as a realistic and promising alternative to the traditional urban housing sectors, and especially to the single-family model. They could offer an alternative to urban real estate developments or the state or municipal social rental housing sector, melted to a minimum in these countries. However, experience has shown that the co-housing movement faces accumulated difficulties and show little practical results in the post-socialist region.

Community housing experiments show a very heterogeneous picture in their philosophy, architecture, organizational and financing forms, community building methods, depending on the different housing traditions, legal framework, and housing policy trends of the countries. In this session, we are looking for researchers who are partners in founding an east-west European co-housing think-tank. Our topic is the analysis of the new experiments, the general obstacles to community housing experiments, and the creation of new models. We are waiting for abstracts on the following topics:

- the use of community housing models in urban development, especially in urban renewal processes,
- urban development, real estate policy, and housing policy instruments supporting community housing,
- participatory planning methodologies in community housing models,
- financing models of community housing models, methods for affordability,
- organizational and social models of community housing,
- experiences of co-housing development from the socialist period,
- co-housing for ageing population and multigenerational community,
- is co-housing the future of design?
- co-housing – sustainable community.

LEISURESCAPES


post-socialist transformation challenges on seasonal landscapes



Chairs:

Dr. **Domonkos WETTSTEIN** PhD / Budapest, H
BME Department of Urban Planning and Design / research & education platform

Prof. **Lubica VITKOVA** PhD / Bratislava, Sk
STUBA Department of Urban Design and Planning / personal webpage at STUBA



Freedom appeared on a new scale but with a different meaning in eastern and western landscapes after the Second World War. While in the West, freedom emerged in the form of the right to leisure, in the East, holidays became a means of consolidating social policy. The increasing infrastructure capacity has opened up new opportunities for domestic tourism and recreation for a wider range of society, while it became a showcase for socialism for international tourism. However the building process transformed the landscapes spectacularly, the buildings were designed just to meet the functional needs of seasonal tourism focusing on a short period of land use. Simple and lightweight, experimental buildings soon became widely popular and deeply positioned in the collective memory as landmarks.

After seventy years, new trends in landscape transformation are taking place. Post-socialist resorts are now being shaped by privatization and tourism concepts instead of socialist ideology. Formerly modern tourist monuments today struggle with problems of heritage protection and rehabilitation. The buildings, once built for seasonal purposes, should now be redesigned to meet the needs of year-round tourism. At the same time, communal memory still looks with nostalgia at the modern architectural monuments of early mass tourism.

The new forms of freedom pose new challenges to the post-socialist leisure escapes. How have new tourism trends transformed landscape identities? What rehabilitation challenges and tools are emerging in the renewal of tourist facilities? In what ways is it possible to define new concepts for post-socialist leiscapes?

We look for answers at different scale levels: In addition to landscape-scale processes, we are also looking for answers to the problems of resort settlements and the architectural heritage. Abstracts can build on theoretical concepts, case studies, process interpretations and spatial comparative analyzes among post-socialist countries or between Eastern and Western Europe.



PROGRAMME & CONTENTS

DOCONF2021 / FACING POST-SOCIALIST URBAN HERITAGE

4th doctoral / postdoctoral conference organized by the Department of Urban Planning and Design, Faculty of Architecture, Budapest University of Technology and Economics, Hungary / 8th-9th OCT 2021

venue: BME 'K' Building / 1111 Budapest, Műegyetem rakpart 3. 2nd. floor 10
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CONFERENCE PROGRAM

8th OCT / FRIDAY

8:30-9:00 REGISTRATION

9:00am – 9:30am OPENING

Dr. Melinda BENKŐ
Chair of DOCONF / H

Prof. György ALFÖLDI
Dean of the Faculty of Architecture, BME / H

Prof. András FERKAI
Head of the Committee on Architecture, Hungarian Academy of Sciences / H

9:30am – 11:00am: THE FIFTIES

Chairs: Dr. Kornélia KISSFAZEKAS / Budapest BME H & Dr. Endre VÁNYOLÓS / Cluj Ro & Dr. Federica VISCONTI / Naples I

Ana BORANIEVA / Barcelona E / MK
In the Shadow of Skopje's Railway Artefact: The Interscalar Character Of The Artefact As A Condition For Constructing New Centrality. (pp84-95.)

Ekaterina GLADKOVA & Prof. Valerii KOZLOV / Irkutsk Ru
Urban planning concepts for the renovation of microdistricts in the 1950s-70s: the result of a workshop in Irkutsk (pp138-147.)

János KLANICZAY / Budapest BME H
Measuring the architectural experience: comparing the '50s and '70s during urban walking tours (pp194-205.)

Bárbara Mylena DELGADO da SILVA & Dr. Eszter KARLÓCAINÉ BAKAY / Budapest MATE H / Br
People's Park: An overview from examples of Post - Socialist urban parks in Europe (pp106-115.)

11:30am – 1:30pm: MASS HOUSING NEIGHBORHOODS

Chairs: Dr. Melinda BENKŐ / Budapest BME H & Prof. Richard KLEIN / Lille F
& Dr. David TICHY / Prague Cz

Maciej SWIDERSKI / Amsterdam NI / PI

Heritage-inspired local knowledge as a tool for planning the future of late-modernist housing estates (pp400-411.)

Réka MÁNDOKI & Dr. John ORR / Cambridge UK / H

Learning from the past - How to create sustainable mass produced buildings today? (pp264-273.)

Jitka MOLNÁROVÁ / Prague Cz

Bottom-up transformations of modernist housing estates (pp308-319.)

Sofia BORUSHKINA / Milano I / Ru

Top-Down Large-Scale Urban Interventions and Density Profile: the Housing Renovation program in Moscow (pp96-104.)

Nikola MITROVIĆ & Dr. Aleksandra DJUKIC / Belgrade Sr

Mapping informal changes - new meanings and new patterns of usage of mega blocks: case study New Belgrade (pp296-307.)

Munkh-Erdene TOGTOKHBAYAR & Dr. Tamás PERÉNYI / Budapest BME H / Mong
Post-socialist urban housing form: Changing ger districts in Ulaanbaatar (pp412-423.)

3:00pm – 5:00pm: SHRINKING CITIES

Chairs: Dr. Bálint KÁDÁR / Budapest BME H & Prof. Zorica NEDOVIĆ-BUDIĆ / Chicago IL USA, Dublin IE & Dr. Angelica STAN / Bucharest Ro

Dr. Branislav ANTONIĆ / Belgrade Sr

Reviving Socialist Shrinking Towns in the Lower Danube Region in Serbia by Embracing their Modernist Urban Heritage (pp30-39.)

Andreea Catalina POPA / Bucharest Ro

Shrinking cities on the Romanian side of the Danube river (pp366-377.)

Mattias MALK / Tallinn Est

With or Without You: The Local Significance of Rail Baltic in Pärnu (pp252-263.)

Anna Kornélia LOSONCZY / Budapest BME H

Rákospalota vs. Újpalota: changing centrality of District XV, Budapest (pp240-251.)

Ágnes BERTYÁK / Budapest BME H

Shrinking villages - Population retention and tourism development opportunities of the settlements of Órség (pp72-83.)

9th OCT / SATURDAY

9:00am – 10:00am: ONLINE PLUS

Chairs: Dr. Melinda BENKŐ & Dr. Domonkos WETTSTEIN / Budapest BME H

Antonio NEVESCANIN / Lodz Pl / Hr / from *mass housing* session
Urban Regeneration of The Socialist Modernist Housing Neighborhoods in Lodz, Poland and Zagreb, Croatia (pp320-331.)

Romana HAJDUKOVÁ & Alžbeta SOPIROVÁ / Bratislava Sk / from *shrinking cities* session
Brownfields and green infrastructure in the region of „triangle of death” (pp182-193.)

Lyudmila KOZLOVA & Dr. Anastasia MALKO / Irkutsk Ru / from *the fifties* session
The structural role of public spaces in 1950-80s mass housing: Experience and Prospects of the Akademgorodok district in Irkutsk (pp216-227.)

Andrea NÓBLEGA CARRIQUIRY & Amaia CELAYA ALVAREZ / Barcelona E / from *resilience* session
Urban Resilience in post-Soviet built environment renewal: the case study of Yakutsk (pp332-343.)

Olena LEMAK & Prof. Ľubica VITKOVÁ / Bratislava Sk / from *leisurescape* session / *Transformation of the Danube recreational areas (pp228-239.)*

10:00am – 12:00am: RE-COLLECTIVE (hybrid session)

Chairs: Dr. Julianna SZABÓ / Budapest BME H & Dr. Aleksandra DJUKIĆ / Belgrade Sr

Anica DRAGUTINOVIC & Prof. Uta POTTGIESSER / Delft NI / Sr - online
Regenerative Design and Co-Commitment as Decisive Factors in Mass Housing Revitalisation (pp116-125.)

Yulia BELOSLYUDTSEVA & Dr. Vitaly STADNIKOV / Moscow Ru
Problems of land division as an essential instrument of regulation and urban regeneration in Post-Soviet Russia (pp50-59.)

Diana GALOS / Cluj Ro
Urban housing in the countryside: community building and real estate policies (pp126-137.)

Zofia PIOTROWSKA / Warsaw Pl - online
Reimagining housing cooperatives in Poland: transformation strategies for the future. (pp356-365.)

Annamária BABOS / Budapest BME H
Key challenges of implementing the cohousing model in CEE countries Comparison Hungary and Poland (pp40-49.)

1:00pm – 3:00pm: RESILIENCE

Chairs: Dr. Árpád SZABÓ / Budapest BME H & Dr. Dániel KISS / Zürich-Basel Ch

Bence BENE / Budapest BME H

SPACE SYNTAX & OCOKA - Possibilities of Using Geospatial Technology for Military Analysis on Urban Terrain (pp60-71.)

Dominika GRABOWSKA-ROPEK & Maria JANKOWSKA / Warsaw PI Post-pandemic urban planning rules – future predictions (pp148-157.)

Rachel GYÖRFFY / Budapest MOME H

Towards a Potemkin City: Motifs and Consequences of Reconstructivism in Central- and Eastern Europe (pp158-169.)

Marcell HAJDU / Weimar D / H

Fragmenting Emptiness: The Democratic Resilience of Post-Socialist Public Spaces in Contemporary Budapest (pp170-181.)

Rania MATROUK & Shaha MAITEH / Budapest BME H / Syr

Urban Resilience to in Post-Socialist Cities: A Descriptive Comparative Study Between Courtyard Block and Panel Housing (pp284-295.)

Mariia TUMUREEVA & Dr. Valery KOZLOV / Irkutsk Ru

Novo-Lenino district in Irkutsk city as a post-socialist model of transformation (pp424-433.)

3:30pm – 5:30pm: LEISURESCAPE

Chairs: Dr. Domonkos WETTSTEIN / Budapest BME H & Prof. L'ubica VITKOVA / Bratislava Sk

Gabriel SILVA DANTAS & Dr. Ildikó Réka NAGY / Budapest MATE H / Br

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Dr. Jelena MARIC / Belgrade Sr

Towards more resilient city: improving public health by increasing the usage of urban green open space - a case study of New Belgrade (pp274-283.)

Kinga SÁMSON / Budapest BME H

Hungarian amusement parks from the fifties to nowadays (pp378-389.)

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Experimental architecture: examining Hungarian campings through the examples of two different styles in the socialist era (pp344-355.)



FULL PAPERS

Mapping Informal Changes: New Meanings and New Patterns of Usage of Mega Blocks: Case Study New Belgrade

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ABSTRACT

The focus of the research is informal change in the post-social mass housing. Informal change refers to usage of space or need, activity and movement of pedestrians, their intentions and walking targets. Walking becomes an important aspect of an individual's life as a mode of transportation or leisure activity. The study area is mega blocks on New Belgrade - block 23 and block 30. There is a question, is the movement of users limited to the intra-block or inter-block, or wider zones of this part of the city. This paper aims to define the edge of the neighborhood of opportunity and urban patterns in a post-socialist New Belgrade, by mapping informal changes focusing on walking routes and destinations and measuring walking distances. The presence of walking routes show that it is comfort space with elements of healthy urbanism, also new lifestyle and dynamics of using mega-blocks. To answer these questions, there will be used different methods: walking interview - experimental qualitative and quantitative method, online survey, unobtrusive observation and visual materials. The research reveals how informal changes as walking can be heritage in the community or because of a wide range of factors, absolute individual preference.

KEYWORDS

mapping, informal change, new pattern, usage, walking distance



Figure 1. Pedestrian walkway in mega block 30, New Belgrade
(Author: N.Mitrović, June 2021)

1. Introduction

Given the growing dominance of motor vehicle use and declining physical activity, the non-motorized mode of transportation is becoming an important aspect of an individual's everyday life in terms of public health, economic, environmental and other benefits. (Hatamzadeh et al., 2014). Non-motorized mode of transport means walking and cycling. Walking is a form of physical activity that is available to individuals of all ages and social groups. Many studies suggest that the success of a public health strategy, also an individual's decision about walking, will be highly influenced by built environment design and a wide range of factors (Wasfi et al., 2017; Hatamzadeh et al., 2014).

Walking is a part of two bodies of literature - health/leisure versus transport / land-use. Relationships between walking activity, health, and the built environment are significant in the literature. In studies, walking behavior is assumed to be affected by permeability, usually within a radius of 1000m as much as *the neighborhood of opportunity* (Millward et al., 2013). (See Figure 1.)

A series of factors affect walking behavior, but important ones are age and gender, as individual characteristics, and significant one is walking distance, as a factor in the probability of choosing active transportation (Alfonzo, 2005).

Distances of 400m and 600m, are often used as an acceptable walking distance in many studies, but also has suggested that walking trips longer than 400m may not be uncommon (Millward et al., 2013). However, in this paper, a distance of 500m will be used as an urban indicator and these trips longer than 500m will be the subject of research. As in some of the studies, the meaning of walking behavior is decisive fact, and it will treat as the probability of choosing walking in a trip for a single purpose with a single destination (Hatamzadeh and Hosseinzadeh, 2020).

Kevin Lynch defines the urban edge, perceptual dimension of urban design, as a physical element of environmental space that is a linear element that is either not used or considered as a path and often form the boundary between areas or linear breaks in continuity (Carmona et al., 2003). In this paper, the urban edge will be considered as a zone between two areas.

Post-socialist cities in transformation characterize some crucial changes in urban patterns and urban impacts. The most important change of urban pattern is diversification of mono-functional areas, while, of urban impacts are increase in individual standards and choices, shopping opportunities and personal mobility (Stanilov, 2007a). Bearing in mind these increases in individuality, especially personal mobility and dominance of car usage, walking in post-socialist city has become important activity and tool for its further development, as a measure of satisfied needs of residents in urban space.

The spatial arrangement of urban activities and spatial impacts on residential development patterns are conditioned by market forces, public policies, and the pre-existing spatial structure of the socialist city (Stanilov, 2007a).

Informal change, in this work, refers to usage of space or need, activity and movement of pedestrians, their intentions and walking targets. Walking destinations show the intention of the users to move, i.e. what goal of moving, what needs they are meeting. The presence of walking routes and their distances show that it is a space that is good for a walking experience and satisfy levels of walking needs – feasibility, accessibility, safety, comfort and pleasureability (Alfonzo, 2005).

In the socialist mass housing, the neighborhood units were called *mikrorayons*, each one of them centered on an elementary school and containing between 5,000 and 15,000 residents. Each component part of the housing estate was to be provided with services calculated on the basis of its size and place, including schools, playgrounds, libraries, hospitals, etc, but only a few of the planned facilities and services were provided. Most of the large cities in the former socialist countries in Central and Eastern Europe have between 40 and 50 percent of their residential stock in such dwellings, housing over half of their population (Stanilov, 2007b).

Bearing in mind *mikrorayons* in today's post-social city, in this paper, the *neighborhood of opportunity* will be considered as a imaginary territory which represent transformed that neighborhood unit where the user can satisfy all of his needs by walking.


Good example of mass housing where all these changes are present is New Belgrade, and its transformation of mega blocks. It is the specific area of Belgrade as post-socialist heritage, which was built during the socialist period. Ideologically, it has been planned as a block structure where all the needs of an individual should be met within one mega block. Having in mind economic, social and functional changes, the New Belgrade transformed from the open modernist mono-functional into a mixed-use settlement, but urban matrix of mega blocks has mostly remained untouched (Djukić, 2015). New Belgrade planned as a city for car, but now, it is changing to city for pedestrians. Today, in walking of inhabitants between blocks and crossing much greater distances by foot, it can be noticed informal changes in everyday life practice.

There is a question, what is the walking distance of residents in post-socialist mass housing neighborhoods. What about the neighborhood of opportunity, is it the same size as the area of the mega block?

In this paper, there will be considered two important topics: mapping informal changes focusing on walking routes and destinations in order to define urban patterns and the edge of the neighborhood of opportunity in a post-socialist New Belgrade.

2. Method and material

This paper explores individual's preferences for walking in a post-socialist neighborhood like mega blocks of New Belgrade. This paper aims to determine



whether the walking distance in the block structure is greater than 500m, as well as whether the movement of users is limited to the intra-block or inter-block, or wider zones of this part of the city. That is, the aim is to define the edge of the neighborhood of opportunity, by considering the opinions and preferences of users.

The methodological framework of the research is walking interviews, as an experimental method of collecting qualitative and quantitative data - routes and conversation, to mapping users behavior. Also, there is web-based survey tool – Google Forms.

2.1. Walking interview and Google Forms

A *walking interview* is a type of interview in capturing data relating to people's understanding of place. The focus of the interview is on the relationship between what people say and where they say it - qualitative and quantitative. Interviewees are prompted by meanings and connections to the surrounding environment and it provides richer data than a sedentary interview. Quantitative data concerning the routes taken, as well as qualitative data derived from the conversational exchange (Evans and Jones, 2011). *Google Forms* is a cloud-based data management tool used for designing and developing web-based questionnaires. As a web-based survey tool, it has an upper hand regarding response speed, costs, response rate and variable costs. (Vasantha Raju and Harinarayana, 2016). In this paper, the questions for the respondents are related to the measurement of preferences towards pedestrian movement.

The results of walking interview and Google Forms will be considered merged, given the similar structure of collecting data. It is based on responses from about 150 respondents – about 120 responses on Google Forms and about 30 face-to-face interviews. Demographic data such as gender and age are firstly collected, and then the data that this paper focuses on - the needs for which an individual move from the block, the three most distant specific destinations to walk (greater than 500m) and the assessment of distance, that show intent to move, and personal considerations of what contributes to the pedestrian movement for people their age - what factors of environment can affect them. On the end, respondents were asked to draw their walking route on a map (just in case of walking interview).

The age and gender structure of the respondents roughly corresponds to the age and gender structure of the residents in the block. It is assumed that the demographic structure of one block roughly corresponds to the demographic structure of New Belgrade. According to the Republic Bureau of Statistics of Serbia, the age structure of New Belgrade is such that about 25% of the population is under the age of 25, about 55% between the ages of 25-65, and about 20% older than 65. While the gender structure is such that 54% are female and 46% are male.

The limitations of the walking interview method are related to the results themselves, which represent the respondents' assessment. The answers of the respondents, as well as the drawing of their route on the map are subjective results. Also, Google Forms as a method, in addition to numerous advantages, it has disadvantage because based on user assessments. There are privacy and security issues, too. The lack of objective data on pedestrian movement can be compensated by some of the methods related to the analysis of the readability of open space or the intensity of use in open spaces, i.e. the relationship between the configuration of space, and socioeconomic relations, such as space syntax method (Djukić and Vukmirović, 2012).

2.2. Study area – mega blocks

The study area included two typical mega blocks of the central zone of New Belgrade. Mega blocks 30 and 23 are similar in size and density, but in different positions. Mega block 30 is located quite close to the quay (Zemun Quay) and large park areas along the river, contrary, mega block 23 is located next to the highway, and near two big constructions – office building and Belgrade bus station. (See *Figure 2.*)

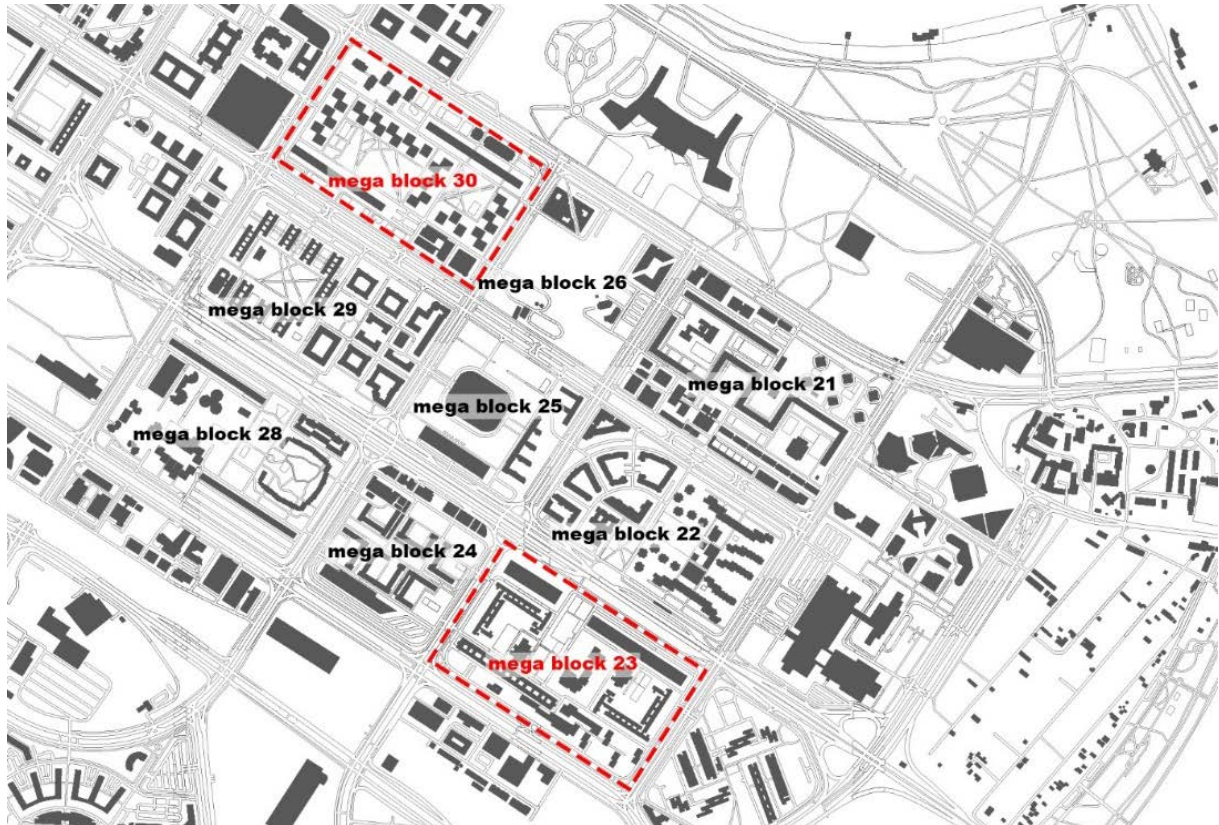


Figure 2. Map of New Belgrade – Study area include mega block 30 and mega block 23 (Author: N.Mitrović, July 2021)

3. Results and discussion

Implementing the structure of research discussed above, results of research on study area of New Belgrade mega block 30 and 23 will be presented.

3.1. Results of walking interview and Google Forms – mega block 30

With regard to specific destination to which pedestrians walk more than 500m, in age under 25, the most respondents mentioned café, restaurant, raft or someone else's home (17%), while in age between 25-65 that is supermarket (Mercator, 20%) or café and rafts on Zemun Quay (17%), and in age older than 65 it's open marketplace (Old Mercator, 33%).

If we pay attention to the average distance and intention to move, it can be distinguished study, shopping, leisure, work or other home routes. Study routes are rare (1%) and often between 200m and 5km, because it's often activity in the mega block itself, but there are some routes to distant facilities.

Work routes are individually (about 1%) but vary from 500 to 1000m, while shopping routes are the most often (about 44%) and there are plenty routes to shopping mall (about 3km), supermarket (about 1000 m) or open marketplace (about 2.5km). Routes on foot to other homes are often in space of mega block or next door mega block (about 12%) and amount to about 1600m. Because the mega block is close to big green areas and quay, leisure and routes for recreation are really often (about 42%) and with the biggest distances that vary from 6km to 8km.

Some of the factors that respondents cited to influence the choice of pedestrian movement in age 25 are individual preferences - they prefer to go on foot, rather than by public transport, and cite as problem street signs and long waits at traffic lights when changing side streets when walking. In the age of 25-65 consider that people their age often do a lot of work on foot in New Belgrade, because in the 1990s, due to the bad economic situation and not good enough public transport, they commonly went everywhere on foot, while in age older than 65 state as the main advantage flat terrain.

It can be concluded that the inhabitants of mega block 30 crosses a distance of more than 500m during daily activities in the block itself, but also in the blocks next to it. However, for longer distances, an important factor is age. An interesting observation is that certain age groups see walking as part of a habit and heritage from a different time, regardless of factors that have changed today. (See Figure 3 and Figure 4.)

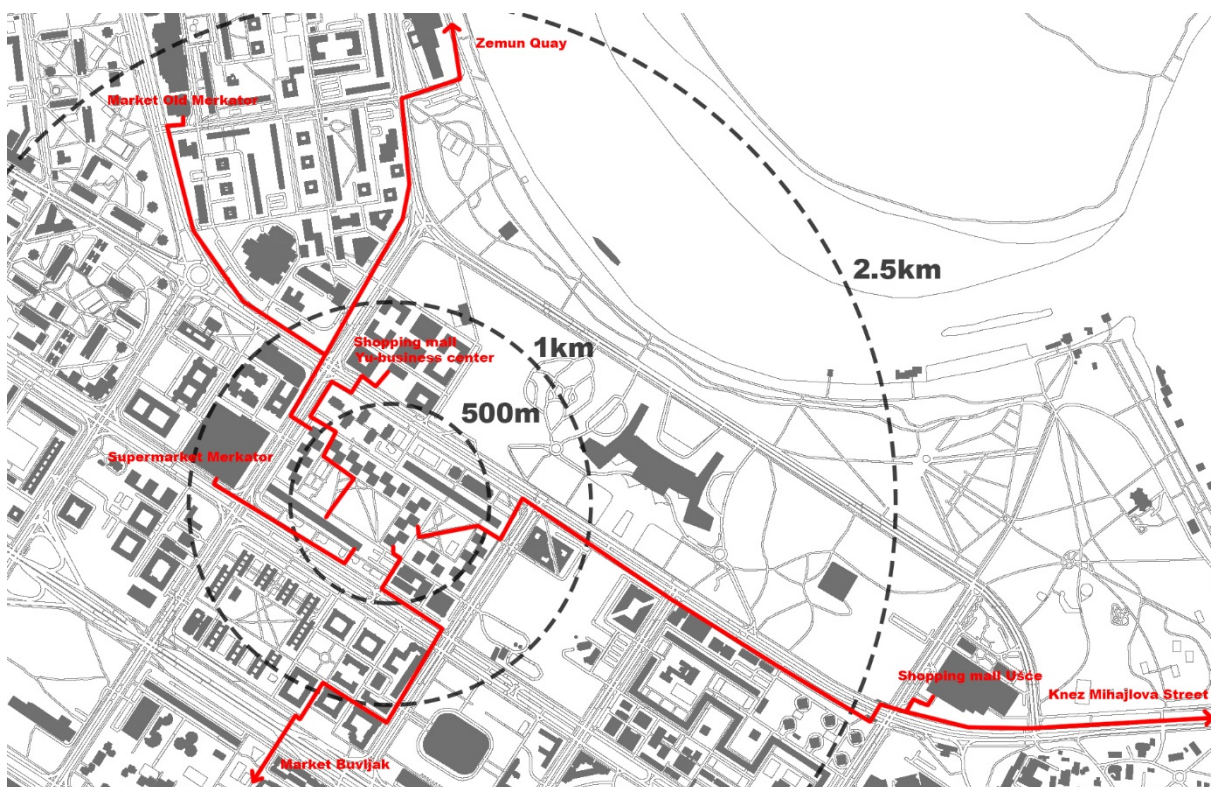


Figure 3. Walking routes from mega block 30 (Author: N.Mitrović, July 2021)



*Figure 4. Walking outside(left) and inside (right) of mega block 30
(Author: N.Mitrović, June 2021)*

3.2. Results of walking interview and Google Forms – mega block 23

If we pay attention to the specific destination to which pedestrians are more than 500m, in age under 25, the most respondents mentioned bus station (Blok 23, 20%) or supermarket and just outdoors (17%), while in age between 25-65 that is also supermarket (Vero, Jumbo, 25%) and just outdoors (23%), and in age older than 65 it's just outdoors, often in the space of mega block or neighborhood (50%).

Concerning the average distance and intention to move, study routes are rare (<1%) as in mega block 30 and often vary from 200m to 2km. Work routes aren't uncommon (about 3%) amount to 1000m, often in next door block where is commercial area, while shopping routes are often again (about 36%), of course, which are also diverse – to shopping mall (about 2km), supermarket (about 500-800m) or open marketplace (about 1-3km). Routes on foot to other homes often are in next door mega blocks (about 7%) and amount to about 1-3km. Here are much less represented classic leisure and recreation routes (about 54%) with distances of about 4-8 km, but often with walking in the circle the blocks themselves are not to the park or quay.

Some of the factors that the respondents stated to influence the choice of pedestrian movement in age 25 are the lack of some lines of public transport and because they prefer to go on foot. At ages 25-65 they find it useful that there are passages, they are like a shortcut that contributes to faster movement in the block itself, but also outside it. However, they are extremely unsafe in the evening, because it is not well lit. Also, they mentioned that there is new construction of New Belgrade bus station and it's not very accessible. While in age older than 65 they cite as the main advantage plenty of greenery as a shade on the tracks in mega block 23, but also in the side blocks, which is important to them as a gathering place in public space, but also when moving to someone else's home and neighborhood.



Figure 5. Walking routes from mega block 23 (Author: N.Mitrović, July 2021)



Figure 6. Walking through passage (left), inside (middle) and outside (right) of mega block 23 (Author: N.Mitrović, June 2021)

It can be concluded that the residents of mega block 23 have less preferences for pedestrian traffic due to external factors, i.e. negative influences in the environment of the block itself. However, they further emphasize the advantage of the passage in the pedestrian experience itself, which speaks to the potential that has not been sufficiently exploited and that could be improved from the aspect of safety. (See Figure 5 and Figure 6.)

3.3. Comparative analysis

By mutually comparing the data of a specific destination, it can be said that the facilities in New Belgrade, such as shopping malls or big open green areas, represent the needs of users that they cannot meet in the block itself and therefore reach those destinations as quickly as possible - on foot. At age under 25, café, restaurants and rafts, especially in space of quay, are the most important destinations. In age 25-65 it is a park or quay (often cafés) for mega block 30, but for mega block 23, it is an just outdoors, because of long distance to quay. At age 65, an open marketplace, just outdoors and other's homes in the neighborhood are important. (See Figure 7) Concerning the average distance and intention to move, in both blocks study routes are rare, but it can be big ones. Shopping routes are dominant and leisure or recreation routes are the biggest ones, but with a different type. One is walking in a park or quay, and another one just through mega blocks.

Bearing in mind leap from totalitarian to capitalism in a matter of only a few years, it is not surprising that the post-socialist city takes on many of the characteristics of the North American patterns of urban development, rather than settling in on the more balanced model of Western European urbanization (Stanilov, 2007a).

Therefore, for comparison walking data of specific destination, it will be taken North American city. Comparing results with another one not post-socialist and neighbourhood which is not mega-block structure, it can be said that there are big differences in using green areas and shopping malls. Halifax is medium-sized North American city in Canada where percentages of walking routes to shopping mall is 3,3% of all routes (versus 6-17% in all ages in New Belgrade mega blocks) and to park, quay or just outdoors are 1,1% or 2,7% (versus about 10% in all ages in New Belgrade, especially in mega block 30) (See Figure 8, Millward et al., 2013). It means that green areas and shopping malls contribute in change of everyday life practice and lifestyle of New Belgrade residents.

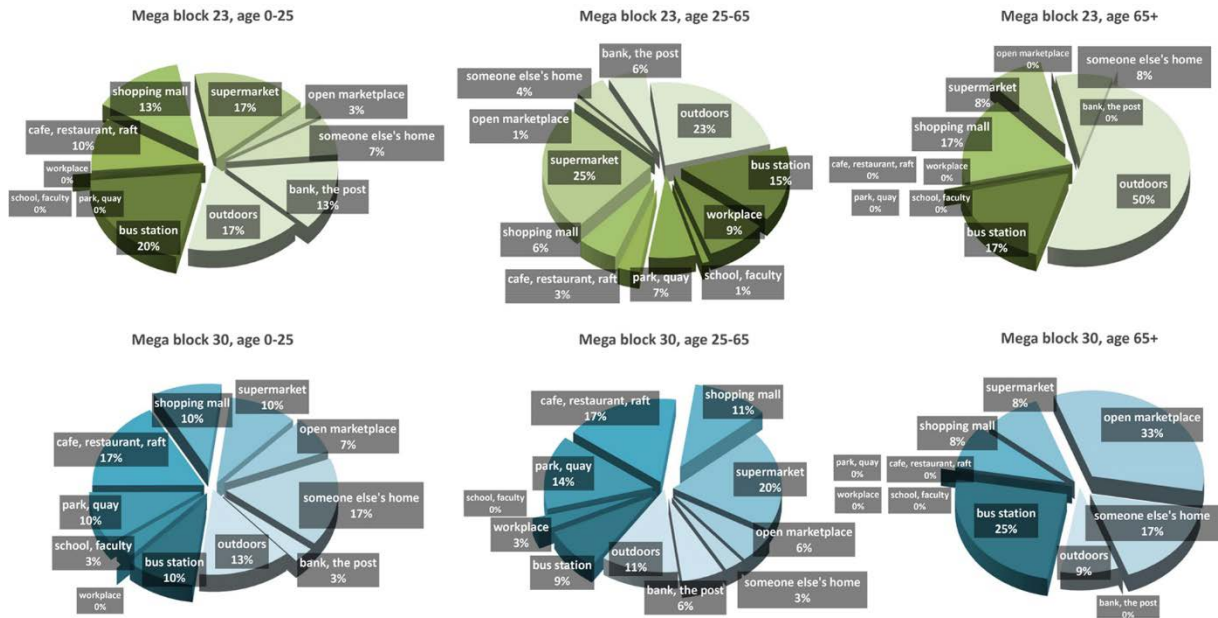


Figure 7. Comparison of data by age – specific destinations refer to mega block 23 (green ones) and 30 (blue ones) (Author: N.Mitrović, July 2021)

AT walking trips, by specific destinations (single-episode trips only).

SIC-based destinations	% of AT walking trips (n = 1790)
Total	100.0
Respondent's home	20.8
Workplace	17.0
Bus stop or ferry terminal	9.1
Restaurant or bar	7.8
Someone else's home	5.7
Grocery store	5.2
Other retail	3.7
Shopping center or mall	3.3
Outdoors away from home	2.7
Bank	2.7
School	2.4
Other services	2.3
College or university	1.6
Fast food	1.5
Drug store	1.5
Government Services	1.3
Park or Beach	1.1
Place of worship	0.9
Private Recreation Facility	0.9
Library	0.8
Retail Sports and Apparel	0.8
Motel or Hotel	0.7
Hospital	0.7
Department Store	0.6
Variety Store	0.6
Parking Lot or Structure	0.6
Gas Station	0.5
Barber or Salon	0.5
All Other	2.8

Figure 8. Specific destinations refer to medium-sized North American city – Halifax, Canada (Millward et al., 2013)

The results show that the position of the mega block is an important factor for an individual's decision about walking which makes a difference between mega blocks. Also, changes in urban tissue contribute in that decision. New structure which is implemented in a mega block structure, has elements of a denser matrix that looks more like the old part of the city and contributes to a better walking experience.

Mega block 30 is located in a good position, near the quay, large park areas along the river and shopping centre, but also on the route which is a good pedestrian connection with the old town (Branko's bridge), unlike another large bridge where pedestrian traffic is not allowed (Gazela bridge). This mega block has almost old urban structure which is initially formed. It can be one of the reasons why pedestrians leave the mega block, in order to find new content and structures that are denser.

Unlike mega block 30, mega block 23 is located next to the highway near two big constructions – office building and bus station. That mega block has a new structure, but in construction. Reason of inhabitants leaving mega block here it can be of avoiding construction sites and spaces unpleasant for walking experience.

4. Conclusions and implications for further work

Summarizing walking interviews and online surveys of mega blocks 23 and 30, there are presence of elements which contribute to a greater walking distance that is greater than 500m when performing daily activities and movements in the block itself, but also its surroundings.

The presence of pedestrian movement and its further development depends on many factors such as the intention of pedestrian movement, age, or gender, but above all on personal preferences. Nevertheless, two groups of conclusions can be singled out as why mega blocks are a favourable environment for a walking experience. First,

what is somewhat obvious, the favourable morphology of the terrain (flat terrain) and the separate pedestrian paths within the boulevard and the block itself contributes to more walking. While another important position is that the pedestrian experience can be considered as a heritage of the transition and turbulent period of the 1990s, where the inhabitants of New Belgrade, due to underdeveloped public city transport, covered much greater distances exclusively on foot.

Having in mind the edge of *the neighborhood of opportunity* is ideologically changed, it can be concluded that neighborhood unit is much larger than the space of the mega block and that depending on the age structure of users, it includes the surrounding blocks, but also more distant zones of New Belgrade and the whole city area.

In research, participants not asked about their lifestyles, cultural beliefs, attitudes and other sociological factors that could affect someone's travel behaviour - marital status, educational level, income, household structure and household interactions, having a driving license and others. Future research should include neglected aspects in the interview and help planning practice define future directions and required improvements in space in aim more using of walking.

New Belgrade shows its adaptability and flexibility to change, where despite the economic influences of the market, it is persistent in providing quality to the end user and, in transformation, can contribute more walking and healthier lifestyle than regular neighbourhoods. The presence of big walking routes in this research shows that, in further work, it is necessary to determine the zones that are important to pedestrians, work on determining the factors and spatial elements that contribute to the walking experience and their protection in the further development of New Belgrade.


Wayfinding, information and signposting for pedestrians can be as one of the solutions. As a need for systematic information, wayfinding system for pedestrians is designed as a network of nodes, arranged so that even if one deviates from it at a certain point one can still rejoin it at the next important point along the route, while the signposting concept represent the signs which indicate attractive pedestrian walkways between the residential districts and the centre, to link up the various parts of town (Hoeven, et.al., 2008).

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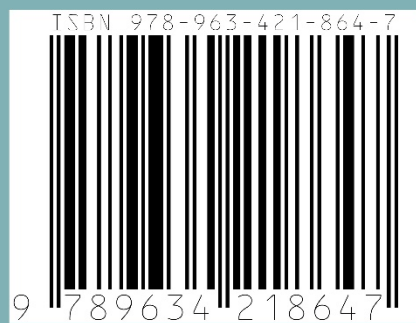
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