

# From community space to no man's land? – The use of public space by vulnerable social groups in post-socialist housing estates. A case from Budapest, Hungary

KORNÉLIA KISSFAZEKAS<sup>1</sup> and TAMÁS EGEDY<sup>2</sup>

## Abstract

Under state socialist planning, large housing estates were built as inclusive, community-centred environments. These spaces were particularly safe for women and children, reinforced by intense social control and close neighbourhood ties. Our study examines the transformation and use of public spaces in post-socialist housing estates, with a particular focus on vulnerable social groups. The research sample area was the Central Housing Estate of Budapest-Pesterzsébet (20th district). The research is based on a complex methodology; in addition to secondary methods, we conducted quantitative and qualitative primary research (resident questionnaire survey, walking interviews/in-depth field interviews, mental map studies, and mapping of pedestrian movement patterns). According to our findings, community areas that were previously actively used have now mostly become underused, neglected spaces that pose a risk to safety. These changes particularly affect young and middle-aged women and young people, limiting their movement and participation in urban life. Research on pedestrian space utilisation has shown that residents' spatial movement basically follows traditional routes, avoiding originally protected and traffic-free routes. This proves that socially oriented planning and the physical infrastructure created as a result do not, in themselves, guarantee the creation of inclusive, safe spaces that can be occupied by communities. A static public space that maintains its former characteristics can lose its social base. For the population to return to community areas, it is necessary to conduct a detailed assessment of the needs of different age groups and genders, and to take them into account in urban planning and development.

**Keywords:** state socialist urban planning principles, post-socialist large housing estates, pedestrian use of public spaces, spatial inclusion, safety

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## Introduction

A key issue in the design and development of cities, neighbourhoods and residential areas is what kind of living conditions and quality of life they provide for the local community. It is no coincidence that a major area of research in urban studies is the development of space utilisation (JACOBS, J. 1961; LEFEBVRE, H. 1991 [1974]; MONTGOMERY, J. 2007; GEHL, J. 2010; SEPE, M. 2025). Ideally, urban

space should be a socially inclusive territorial unit. Spatial inclusion in the urban environment refers to the process and state in which all social groups are guaranteed equal access to urban spaces, services and opportunities, as well as the opportunity to participate in their design and use (PATRICK, M. and MCKINNON, I. 2022).

Large housing estates are obvious areas of research regarding of community space, space utilisation, spatial inclusion, and mobility.

<sup>1</sup>Department of Urban Planning and Design, Faculty of Architecture, Budapest University of Technology and Economics, Műegyetem rkp. 3. H-1111 Budapest, Hungary. E-mail: kissfazekas@epk.bme.hu

<sup>2</sup>Department of Sustainability, Faculty of International Business, Budapest University of Economics and Business, Alkotmány u. 9–11. H-1054 Budapest, Hungary. E-mail: egedy.tamas@uni-bge.hu

Given that, in post-socialist cities of Central and Eastern Europe, large housing estates became dominant features of post-war housing development and housing estates represent a significant part of the local housing stock, a more thorough examination of space utilisation in housing estates is certainly warranted. Especially because these housing estates satisfy the needs of a great variety of socio-economic groups, mainly the less affluent segments of society (Kovács, Z. *et al.* 2018).

The construction of large housing estates in the state-socialist bloc of Central and Eastern Europe, dominated by the former Soviet Union, was influenced not only by the housing shortage but also by political ideology. One of the main promises of the communist system was the right to affordable housing and access to free community services for all. Although the rejection of any architectural/urban planning ideas originating from beyond the Iron Curtain was a matter of principle, the Soviet Union adapted Clarence PERRY's concept of neighbourhood units under the name „rayon theory“ (PERRY, C. 1998 [1929]; GOGISHVILI, D. *et al.* 2017), and its guidelines lived on as major organisational principles in post-World War II housing estates constructed as part of housing development programmes in state-socialist countries (HIRT, S.A. 2012). The importance of community life was a key message of the political system, and the specific function, size, and design of public spaces were also the focus of attention for designers (KALM, K. *et al.* 2023). As the importance of community life was an important message of the political system, open spaces were also well designed and intensively used. Thanks to all this, the public spaces of large housing estates in former socialist countries were particularly inclusive and not exclusionary.

The change of regime brought significant changes in ownership and the composition of housing estate communities, which also affected patterns of space use. Due to trends in the housing market, large housing estates in Hungary and Budapest have become gathering places for the lower middle class over the past three decades (Kovács, Z. *et al.* 2018).

Nevertheless, the inherited built environment and the physical characteristics of the spaces between the buildings have not fundamentally changed.

Our study focuses on exploring and presenting the space utilisation by vulnerable social groups (women and young people) living in a housing estate environment.

Our research questions are as follows:

1. What processes characterise the space utilisation preferences and actual space utilisation of vulnerable groups (women and young people) in housing estates?
2. How has the formerly welcoming and safe character of housing estate's public spaces changed?
3. Where and in what ways do the space utilisation characteristics of women and young people contradict the original design guidelines and urban planning intentions?

We seek answers to the above questions based on the results of an international research project that has been ongoing since 2024. The DUT 15minESTATES project (<https://15minestates.eu/>), focusing on sustainable mobility in large housing estates (LHEs), investigates the correlation between urban space, mobility options, and users' needs and opportunities. The main aim of the project is to investigate the adaptability of Carlos MORENO's 15-minute city principles (MORENO, C. 2024) in the partner countries (Bulgaria, Germany, Hungary, Latvia, Switzerland and The Netherlands). Results presented in the paper are based on the research carried out in the Hungarian case study area, in the Central Housing Estate of Pesterzsébet (20th district).

## Theoretical framework and literature review

### *Spatial and demographic characteristics of space usage in large housing estates*

In the large-scale housing estate construction projects that followed World War II, urban planning principles, building density, and

spatial characteristics show many similarities between the Western and Eastern European countries. The findings of the research overlap in many respects, as identical spatial characteristics generate similar or repetitive behaviour patterns. The use of space in housing estates has also been the subject of extensive comparative research (SENDI, R. *et al.* 2009, 2023; DEKKER, K. *et al.* 2011; BENKŐ, M. *et al.* 2018; KOVÁCS, Z. *et al.* 2018).

Central and Eastern European countries face greater problems in terms of the management, maintenance, and use of public spaces than in other parts of Europe. The deterioration of the condition and quality of public spaces in housing estates essentially began with the construction of the estates themselves. The planned infrastructure, and community spaces were rarely properly completed to the standard specified in the original plans (LEETMAA, K. and HESS, D.B. 2019). Furthermore, in Central and Eastern European countries, years of underfunding during the socialist period were followed by a complete funding shortfall in the transitional years after the change of regime. This process continues to this day, with minor changes, and international literature has already drawn attention to the deteriorating condition and quality of public space and its role in the deterioration of living conditions (PETSIMERIS, P. 2018).

The study of the social and economic impacts of urban public spaces gained significant momentum in the 2010s. Such research has also taken off in Central and Eastern European countries, strengthening local social movements for the improvement of public spaces (LEETMAA, K. and HESS, D.B. 2019). The results of spatial and social analyses confirmed the contradictions between the needs of the population and the mono-functional design of housing estates. From the outset, large, monotonous housing estates with separate pedestrian lanes have been associated with urban planning problems such as insecurity and a lack of social control (WASSENBERG, F. 2018). NEWMAN, O. (1972) drew attention to the no man's land between homes and transport routes (streets) as early as the 1970s. Crime,

vandalism, and feelings of insecurity are most common in areas of this type (ELSINGA, M. and WASSENBERG, F. 1991).

The demographic trends of the housing estates built after World War II in Central and Eastern Europe, and particularly in Hungary, were consistently characterized by the influx of young families with small children. On the one hand, these newly arrived young residents grew old alongside the housing estates, while new young families continued to move in. As time went on, therefore, young families with children and the elderly became the dominant groups in the housing estates (KOVÁCS, Z. *et al.* 2018; LEETMAA, K. and HESS, D.B. 2019).

In presenting the theoretical background, we focus primarily on those groups that are most affected in terms of the safe use of public space in housing estates. This relevance is related to the historical fact that the public spaces under study were predominantly used by adolescents and women, who were the target groups for decades. Currently, adolescents and women (primarily those with young children and/or pensioners) continue to show the most intensive presence in these public spaces.

Access to and use of public spaces have significant social, emotional, and psychological benefits, but these benefits are not evenly distributed among social groups. According to Doreen MASSEY's relational concept of place (1994), the meaning of places varies across different social positions; that is, a place is not a closed, stable entity, but an open formation consisting of networked relationships, connections, and processes, where these networked relationships also encompass economic, social, and mobility contexts. Public space, therefore, is constantly evolving precisely because of its social openness and changing network of relationships. Moreover, the same space holds different meanings for young people, the elderly, or newcomers, making it not a single entity but a constellation of diverse identities. Public spaces are shaped not only by relationships but also by unequal "power geometry". Since not everyone moves through space in the same way, not everyone has equal access to the resources

of the place – that is, mobility and safety are socially differentiated. The same public space may be perceived as safe by some groups, while others may perceive it as threatening.

This is directly linked to the issue of land use and movement patterns, which reveal how individuals and groups actually use public spaces. In this regard, the issue of perception is crucial, encompassing perceptions, meanings, and experiences related to space, particularly the perception of safety, and fear. Fear is not merely a reflection of crime risks, but a socially and spatially mediated experience. These perceptions directly influence one's relationship to space and determine which places become "places to avoid" or "places considered safe." In this context, fear and perceptions thus manifest in specific behavioural strategies, such as altering routes, avoiding certain places, or restricting the use of public spaces to certain times. These practices can result in a partial restriction of space use, particularly among vulnerable groups – women, young people, and the elderly. A growing body of research indicates that women and young people feel less safe in public spaces than adult men, which significantly affects their movement, presence and participation in urban life (GARCIA-RAMON, M.D. *et al.* 2004; MEHTA, V. 2013; ANDERSON, J. *et al.* 2017).

The three defining characteristics – structural conditions, specific modes of spatial use, and perceptions of space – are interconnected through reciprocal relationships: structural conditions shape perceptions, perceptions influence practices of space use, and these practices, in turn, affect both the meaning of space and its structural reproduction (redefinition and transformation) (SOJA, E.W. 1996).

Creating inclusive, safe, and visually appealing environments is key to encouraging walking and the use of public spaces, especially for women. Women's walking and space use preferences are fundamentally shaped by gendered experiences of visibility, safety, and belonging. In this sense, walking is not merely a form of transport, but also an act that expresses the right to public space (PEREIRA, A. and REBELO, E.M. 2024).

Social relationships fundamentally influence the sense of security. Mixed-use, lively neighbourhoods – according to Jane JACOBS' „eyes on the street“ concept – increase social cohesion and perceived safety (JACOBS, J. 1961). Green spaces can help reduce loneliness and promote community connections, which, when carefully planned, indirectly contribute to improving the sense of security among women and young people (NAVARRETE HERNANDEZ, P. *et al.* 2021; TE BRAAK, P. and VAN TIENOVEN, T.P. 2025). At the same time, the physical security of public spaces alone does not guarantee their use. The meaning of spaces, their perceived quality, and the opportunities for social interaction play a key role in how women and young people feel comfortable and safe in public spaces. Concerns about personal safety often cause women to modify their routes or avoid using certain places altogether, which, over time, may result in partial exclusion from public life (VALENTINE, G. 1990; BLÖBAUM, A. and HUNECKE, M. 2005; POLKO, P. and KIMIC, K. 2022; ZYSK, E. 2024; AVAR, S. and KARIMI, M. 2025).

However, the sense of safety is not solely dependent on crime statistics. It is closely related to gender, age, income status, and the social context of the living environment (JÁMBOR, V.E. and VEDRÉDI, K. 2016). The gender safety gap – the difference between women's and men's perceptions of safety – is a persistent phenomenon and is consistent with historical trends (MOORE, G. *et al.* 2023). According to this, women and young people consistently report feeling less safe in public spaces, particularly in less crowded areas and after dark.

Women's behavioural responses to fear are shaped not only by fear of violence or crime, but also by the quality of social relationships in their living environment. Avoiding places is often more related to weak social cohesion and a lack of community control than to the actual risk of crime. (YATESA, A. and CECCATO, V. 2020).

Young people's sense of safety also shows a specific pattern. Girls and young women generally experience a heightened sense of

threat, while adolescent boys are more concerned about physical violence or conflicts between peer groups. Adolescents' use of space is strongly influenced by peer pressure, which determines where they appear and where they avoid (MOORE, G. *et al.* 2023). The concept of 'place as partner' highlights that young people's emotional attachments and space utilisation are in dynamic interaction with built and natural elements.

Despite this, urban planning and regeneration processes are often based on the modernist concept of the 'neutral user', which reflects the perspective of adult, healthy men (SANDSTRÖM, I. *et al.* 2024). Planning consultations are typically considered to be an "adult space", which marginalises young people, and ignores the emotional and relational experiences that children and young people contribute to the meaning of public spaces (O'SULLIVAN, S. *et al.* 2020; GUTIÉRREZ-UJAQUE, D. *et al.* 2025).

#### *The local context in Hungary and Budapest*

After World War II, the new state-socialist political and social order in the Eastern Bloc, including Hungary promised equal opportunities for all. Housing construction became a central element of the political narrative of the „welfare state“ and affordable housing (KISSFAZEKAS, K. 2022). The new forms of development and the intermediate spaces significantly improved the quality of life compared to the previous, often unhealthy living conditions (KOVÁCS, Z. *et al.* 2018). Housing estates carried the promise of modernity: they were characterised by comfortable, serviced flats, uniform infrastructure, and planned community spaces. One of the central principles was to ensure good pedestrian access to primary institutions of neighbourhood units (schools, kindergartens, shops) and to separate pedestrian and motor vehicle traffic.

In line with the political aspirations and social message of the system, greater attention was paid to equality and the accessibility of shared (state-owned) spaces for all. The

main feature of the housing estates was their large green areas, so the housing estates were indeed very airy and breezy. The green areas between residential buildings were planned in detail, with the definition of functional zones, public space elements, and footpaths.

From the time of their construction during the era of state socialism, the public spaces of the housing estate were used intensively. Playgrounds and benches were primarily places for women to socialize (SZABÓ, B. 2024). The public spaces in the housing estate were considered semi-private spaces, where everyday life was visible and controlled. The users of public spaces were primarily young women supervising small children and walking with babies, as well as children and teenagers without parental control. For children, the public spaces of housing estates functioned as quasi-outdoor living spaces: they could play all day in the spacious areas between the houses, which were mostly free of car traffic (*Photo 1a-b*). After school, it was common to see children hanging out in parks, which were an integral part of housing estate's public parks. Compared to a traditional urban environment, the spaces in housing estates were truly transparent, accessible on foot, and, due to the low volume of traffic at the time and the separate traffic system, they were particularly safe (NAVARRETE HERNANDEZ, P. *et al.* 2021).

After the political and economic system change in Hungary, the centralised, paternalistic role of the state, which had previously ensured the uniform maintenance, upkeep, and social operation of housing estates, ended (SÝKORA, L. and BOUZAROVSKI, S. 2012). Housing estates built in different decades took divergent paths in the housing market following the political transition. The large-panel housing estates of the 1970s found themselves in the most unfavourable position, increasingly becoming part of the lower-middle-class segment of the housing market. Due to the population's lack of capital and the delayed launch of renovation programs, we witnessed a decline in the value of prefabricated housing estates in the 1990s



*Photo 1a-b.* Housing estates in Budapest. Teenagers are playing without adult supervision in the 1970s.  
 Source: Fortepan (ID: 195718; 97523).

(KOVÁCS, Z. *et al.* 2018). The economic transition entailed a transformation of the space utilisation and everyday life in the housing estates (BOROS, L. *et al.* 2016; OUŘEDNÍČEK, M. and KOPECKÁ, Z. 2023). The personal relationships and community spirit that had characterised them for several decades since their construction broke down.

As a consequence of the so-called give-away privatisation in Hungary (sale of apartments at very low prices to former tenants), the housing stock passed into private hands, while public spaces and green areas remained essentially in municipal ownership, generating legal and urban management problems that continue to this day (VAN KEMPEN, R. *et al.* 2005). This determined their fate, as without central state support, they completely lost the resources necessary for their renovation and maintenance. In many cases, this led to the physical deterioration of public spaces, the ageing of infrastructure, and the loss of function of community spaces. The size of the open spaces became disproportionately large in relation to the functions they offered and became under-used. They give the impression of being a no man's land, where at most pedestrians pass through to shorten their routes. However, for many people, this is not an option, as crossing large, uncontrolled, and unmaintained areas poses the greatest risk. The sense of security has basically disappeared.

We can conclude that the airy development created in the wake of the former modernist design idea, the freely accessible, flowing community green space, is now in most places synonymous with excess, unused, and neglected areas. This primarily affects the more sensitive groups in terms of public space use, namely, minors regardless of gender and women regardless of age. These are the people who continue to use or would use pedestrian public spaces more intensively at different times of the day. In many places, however, this is now without the protective network of community ties that once existed in public spaces.

## Methodological background

### *Presentation of the sample area*

The sample area is the Central Housing Estate of Pesterzsébet in Budapest's 20th district. The formerly independent settlement was annexed to Budapest in 1950. The aim was to create a self-sufficient working-class town centre by modernising and densifying the existing housing stock, with „modern“ residential buildings, large green spaces and basic amenities. The central area, built up with existing suburban family houses, was designated for the housing estate. During the construction of the housing estate, some

of the more important historic streets and a few historic buildings were retained (e.g. the Town Hall, built in 1906, and the cultural centre, which has played a significant role in local public life ever since).

The Central Housing Estate was built in three main phases from the 1960s to the end of the 1980s, with the construction of approximately 7,200 flats (*Figure 1*). In the first phase (1960s – marked 1 in *Figure 1*), five-storey houses and ten-storey tower blocks were built. In the second phase (1970s – marked 2 in *Figure 1*), the previous stock of single-family houses was demolished, and 5,000 new flats were constructed in their place. A key element of the uniqueness of the second-phase Scandinavian houses is the system of passageways on the ground floor of the long, articulated residential buildings, which connect to the network of public spaces and park footpaths. In the third phase (1980s – marked 3 in *Figure 1*), the number of flats was increased using large-panel technology. The super-blocks are criss-crossed by footpaths leading

in different directions, some of which lead to the entrances of the residential buildings, others to important structural points, institutions, and public transport stops.

The market perception of housing estates is well reflected in the trend of average prices for apartments in these estates. In general, we can say that between 2014 and 2025, the market for apartments in housing estates was one of the most dynamic segments of the Hungarian and Budapest housing markets. During this period, housing prices in housing estates skyrocketed, with a 368 percent increase in value in this segment and peaked in the first quarter of 2026 (average price for high-end housing estates in Budapest is around 1 million HUF/m<sup>2</sup>; approx. 2,600 EUR/m<sup>2</sup>) (www.otp.hu, 2025). Nevertheless, the unfavourable position of the Pesterzsébet Central Housing Estate in the housing market is reflected in the fact that, at the end of 2025, it was among the housing estates with the lowest average prices in Budapest (650,000 HUF/m<sup>2</sup>; ap-



*Fig. 1.* The three construction phases (left), and site plan (right) for the area under study. 1–3 = For explanation see the text. *Source:* Google Maps / Planning archive.

prox. 1,700 EUR/m<sup>2</sup>). At the same time, the low average price represents a good entry point into the housing market for those with limited financial resources. This unfavourable position in the housing market can also be attributed to the fact that, according to the FHB Family-Friendly Neighbourhood Index, Pesterzsébet has traditionally been among the least family-friendly residential areas in Budapest ([www.mbhindex.hu](http://www.mbhindex.hu), 2016).

The population of the Central Housing Estate of Pesterzsébet is 16,500 (2022), which is 26 percent of the district's population. The housing estate is characterised by unfavourable demographic trends. The population is declining, the proportion of elderly people is higher, and the proportion of children is lower compared to the district's indices, and there is a much higher proportion of single-person households. On the positive side, the unemployment rate in the housing estate is low (2.4%). The more educated, wealthier, and older segments of the population live in the southern part of the housing estate, while the younger, less educated, and often unemployed segments of the population are found in the northern part of the housing estate. It is no coincidence that newcomers to the housing estate also prefer the central and southern residential buildings.

### *Research methods*

Between 2022 and 2025, the research team conducted extensive empirical studies in the case study area to explore and evaluate the characteristics of public space use and the quality of the living environment in the sample area. The methods used were as follows:

1) Online and face-to-face resident questionnaire survey.

Between March and September 2025, the research team surveyed the mobility habits of the local population, their perception of the housing estate and the state of (public) safety in the living environment. We posted the online survey on social media platforms, while the offline surveys were conducted at public institutions (e.g. libraries) and

through street interviews. The questionnaire included single-choice and multiple-choice questions. During the survey period, a total of 143 online and 123 offline questionnaires were completed, primarily using a convenience sampling method. From a methodological standpoint, the sample is not representative; however, from a statistical standpoint, it approximates the 2 percent sampling size typically used in microcensuses, so the results obtained can be considered relevant.

2) Walking interviews (in-depth field interviews).

Between March and May 2025, we conducted in-depth field interviews with residents using a random stop method. The walking interview method reduces barriers to participation, moderates power imbalances between the researcher and participants, and provides opportunities to observe participants in their familiar environments (EVANS, J. and JONES, P. 2011). The conversations were digitally recorded, transcribed, and then subjected to content analysis. The route taken during the conversation was recorded using the STRAVA application. As part of the survey, 49 walking interviews were conducted, with an average route length of 3.2 km, and an average interview length of 94 minutes. The questions covered ways and habits of using public spaces, as well as concerns, fears, and positive experiences related to life and the environment in the housing estate.

3) Fieldwork – mental map and route mapping survey, pedestrian space utilisation.

On 5 September 2025, on a typical school day between 12:00 and 17:00, at the end of kindergarten and school activities, we conducted a route mapping mental map among children and young people with the help of 28 architecture students. The survey was carried at 1 kindergarten, 2 primary schools (7–14 age group), one specialised music school, and one combined primary and secondary school (ages 7–18).

With the help of the university students, the respondents drew their main walking routes on a sketch map of the housing estate and marked the places to be avoided. We

then compiled the on-site route sketches on a shared map. Using educational institutions as starting points, we drew the dominant routes used by young people daily. The routes taken by young people travelling alone and with their parents are marked separately. A total of 90 respondents' pedestrian mobility routes were mapped using this method.

4) Public workshops – drawing data for community planning.

In March and September 2025, we conducted two public workshops using interactive mapping to assess residents' opinions on the use and perception (good and bad places) of locations in the housing estate. The workshops were preceded by two months of preparatory work, during which the research team defined the empirical tasks to be carried out (the objectives, methodology, and implementation of the use and perception surveys) and assigned responsibilities, developed the marketing strategy, and put together the workshop program. We publicized the program on municipal and public online platforms, in local newspapers, and on advertising platforms. A total of 78 residents took part in the workshops, and a further

20 residents later commented on the aggregated results with the help of moderators.

Thanks to the combined methodology, we were able to gain a comprehensive understanding of various aspects of the housing estate environment (e.g. questionnaire survey – mobility characteristics; mental mapping, route drawing, and walking interviews – space usage preferences and characteristics; workshops – perceptions of public space). The objectives of the methods used, as well as their target groups (participants and relevant stakeholders), differed, so the results of each method complemented one another well (*Table 1*). Thus, the basic information obtained from the public survey was effectively supplemented and enriched by the results of fieldwork, public activities held during the workshop, and walking interviews.

## Results

Our basic hypothesis was that large, contiguous but unsupervised green spaces are avoided by women and young people walking alone, even if shorter.

*Table 1. Summary table of applied methods*

Methods	Objective	Target group	Implementation method	Date / duration	Participants / respondents
Residential questionnaire survey	Assessing mobility habits and characteristics	Local residents	Online and in-person residential questionnaire survey	March–October 2025	266 respondents
Field research – mental mapping and route drawing	Identifying pedestrian space-use preferences	Children and young people from local educational institutions	In-person collaborative drawing sessions involving architecture students	5 September 2025	119 participants
Community workshops	Assessing local perceptions of public spaces	Local residents	Two workshop sessions	March and September 2025	78 + 20 participants
Walking interviews	Understanding public space use habits and their underlying reasons	Local residents	In-depth interviews conducted while walking	March–May 2025	49 participants

*Source:* Authors' own elaboration.

Figure 2 shows the responses of the entire sample without breakdown by gender and age. The lack of public safety in housing estates was often mentioned as a negative factor in public discourse and street interviews. Residents cited a wide variety of reasons for this, ranging from the presence of drug users to vandalism. However, criticisms regarding public safety were not reflected in our questionnaire survey results: respondents rated the safety of their neighbourhood as moderate.

Respondents rated the immediate vicinity of their homes as the safest in terms of public safety, which can basically be attributed to their knowledge of their immediate neighbourhood and community, and the trust based on personal relationships. Public spaces (parks, playgrounds, and car parks) also received very good ratings in responses. Thanks to strong and targeted central support over the past decade, the infrastructure (equipment, condition) and

supervision (mostly fenced and well lit) of Hungarian playgrounds has been of a much higher standard than that of other public spaces. All this has, of course, resulted in positive developments in the areas of safety, and public security. Criticism of the safety of public transport stops was raised several times in the walk-through interviews. This is also less reflected in the results of the entire sample, although respondents undoubtedly feel less safe there than around the entrance to their own home or in public spaces in general (Figure 3).

Figure 3 also reveals the pronounced differences – discussed in detail later in the paper – in perceived safety between male and female residents, which are associated with their differing life situations and everyday experiences.

The results broken down by age show that respondents are generally not concerned about public safety in the housing estate. All

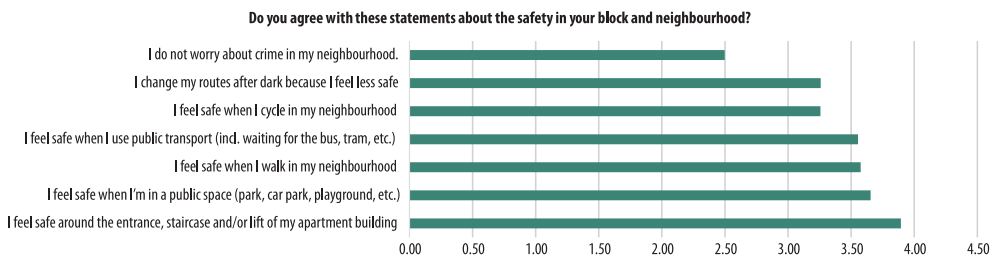


Fig. 2. Assessment of the safety of housing estates and public spaces in the entire sample, n = 266. Source: Authors' own compilation.

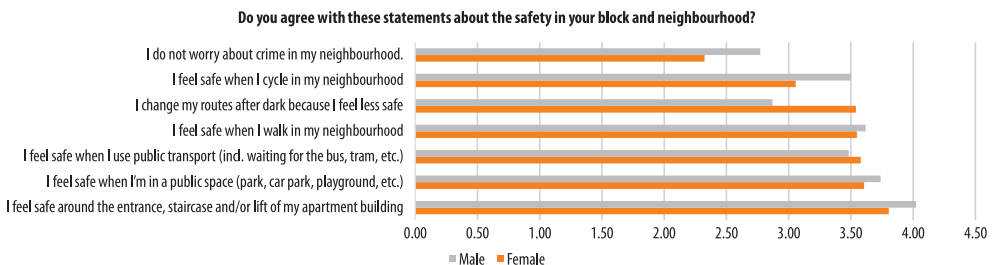


Fig. 3. Assessment of the safety of the housing estate and public spaces by gender, n = 266. Source: Authors' own compilation.

age groups consider the immediate surroundings of their residential building to be the safest, and respondents also consider parks and public spaces to be particularly safe.

Despite widespread stereotypes, the oldest age group, those over 65, feel the most secure compared to other age groups. Our findings are consistent with international findings and provide strong support for them (KÖBER, G. *et al.* 2022). The higher sense of security among the oldest age group can be attributed to the fact that this group was the first to move into the housing estate after it was built, and they have essentially grown old together with the estate. Due to their age, they are a group with a high degree of local knowledge and extensive personal and social connections. Their sense of security is closely linked to the place and the higher sense of security they have become accustomed to in previous decades. Their personal acquaintances and social relationships are also likely to be stronger than those of younger people, as they have decades of history behind them. The values of the under 25, and over 65 age groups are similar in many cases. These results deserve greater attention

because these are the age groups that do not travel exclusively for specific purposes in public spaces and residential areas. The 26–65 age group reports the lowest sense of security in all examined. Our results therefore, did not support our basic hypothesis that the sense of security among young people (under 25) and the elderly (over 65) would be the lowest (*Figure 4*).

When examining the responses by gender, fundamental differences between the opinions of men and women in the entire sample become apparent in questions concerning the safety of housing estates and public spaces. (*Figure 5a-f*). The differences between male and female perceptions are clearly visible. With one exception, the sense of security among the women surveyed is noticeably lower than that of the men. The exception is the sense of security experienced in the vicinity of public transport stops, as mentioned above. This is obviously due to the presence of other people, and public lighting. It is not surprising that the most striking difference between the sexes is in their assessment of their sense of safety after dark (3.54 for men versus 2.87 for women).

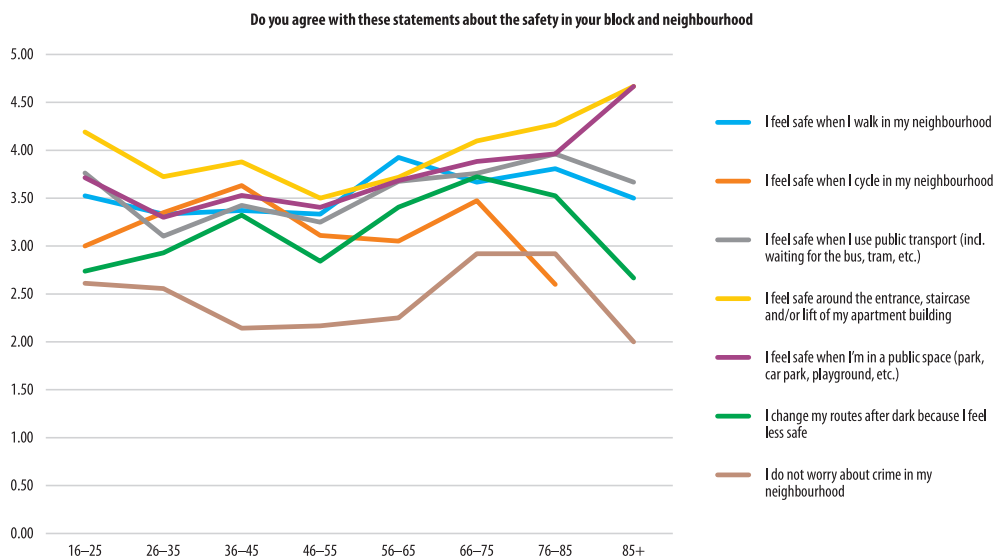


Fig. 4. Assessment of the safety of housing estates and public spaces by age, n = 266.

Source: Authors' own compilation.

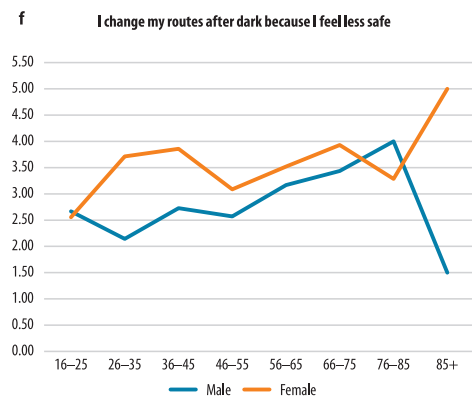
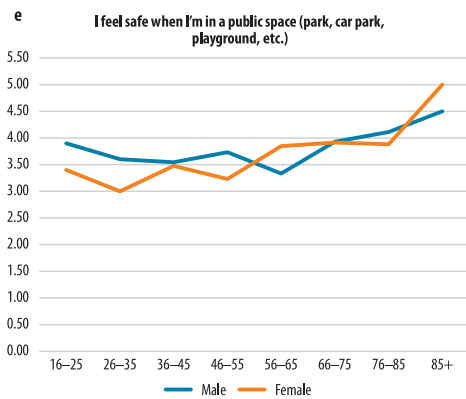
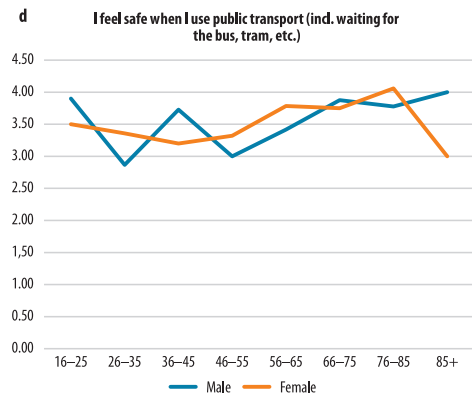
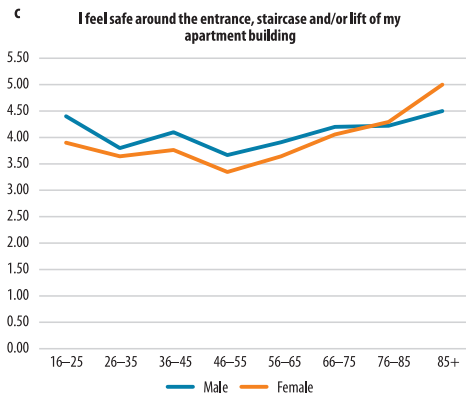
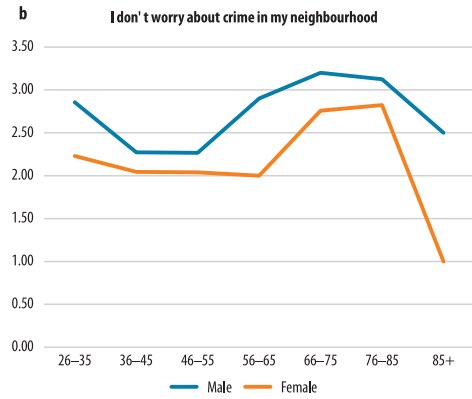
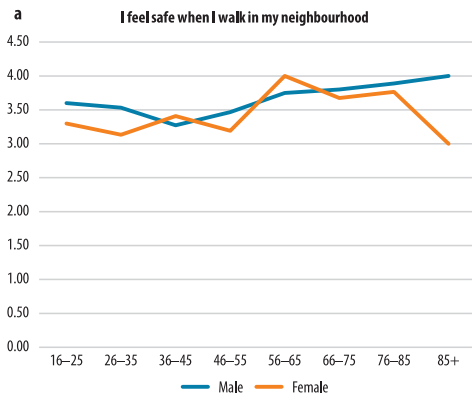


Fig. 5a-f. Assessment of sense of security based on gender and age groups, n = 266.  
Source: Authors' own compilation.

In the case of women, the differences between age groups are also striking. Women under the age of 35 feel significantly less safe than men and women in other age groups.

Our findings support our assumption that the public spaces in housing estates, which were traditionally used and dominated by women without fear before the change of regime, have now lost this characteristic in post-socialist conditions. For young women, the housing estate environment increasingly represents an uncertain and less safe living environment.

The results of the walking interviews corroborated the findings obtained through other methods. The interviewees are generally satisfied with the opportunities offered by the housing estate environment; however, the use of public spaces and the sense of safety (a decline in the subjective sense of safety, an increase in feelings of insecurity, especially in the evening hours) mean that the quality of urban life is problematic in many cases. One reason for this is that the attitudes of young people, and older residents toward public spaces differ and are often in conflict (e.g. the use of benches and playgrounds). These factors also contribute to the decline in pedestrian traffic.

The main lesson to be learned from the results of the study mapping pedestrian routes is that respondents practically only use traditional streets between school (work) and home (*Figure 6*). Despite the extensive pedestrian network and shorter routes, they are reluctant to walk through parks. Women walking their young children and young people travelling alone prefer streets with heavy motor vehicle traffic to the protected internal roads designed specifically for pedestrians, of which there are many in the area (*Figure 7*).

The results of community planning in public workshops support our earlier findings regarding pedestrian routes. In other words, participants essentially only evaluated traditional streets in tasks related to both the frequency of space use and public spaces and places considered good or bad. *Figure 8* and *9* show the paths and public spaces within residential blocks that appear for pedestrians as blind spots. The bad places are basi-

cally linked to the busy main road passing through the area. The good locations are concentrated along the historic main street (Kossuth Lajos Street) that was retained during the construction of the housing estate. It stands out among the most visited places during the week as well. The popularity of the main street is not due to its lack of traffic or shopping opportunities, as a significant part of the housing estate is traffic-free, and the shops sell cheap mass-produced goods. As a traditional street, the main street represents history, tradition, and local identity. Its popularity is, in many ways, a critique of the modernist housing estate environment.

To sum up, in the local community, middle-aged people tend to have a negative attitude towards the sense of security and public safety in relation to the housing estate and its public spaces, while the oldest age group has a positive attitude. In terms of gender, women are clearly less satisfied with public safety. The most vulnerable group is young to middle-aged women, who have the lowest sense of security and are the most critical of public safety in the housing estate. As a result of changes in the state of public spaces and a decline in the subjective sense of safety (primarily a sense of insecurity), pedestrian traffic is on the decline and is increasingly shifting to major thoroughfares, avoiding the previously safe, traffic-free routes and public spaces. The use of public spaces is becoming increasingly contentious, thereby diminishing their community-building and cohesive nature.

## Discussion

In our historical overview, we showed that during the communist period, the built and public spaces of housing estates presented a much more inclusive environment. The decline in inclusiveness is closely related to differences in perceived safety among various social groups and the resulting differences in spatial practices. Inclusion depends not only on physical access to public spaces, but also on the extent to which these groups

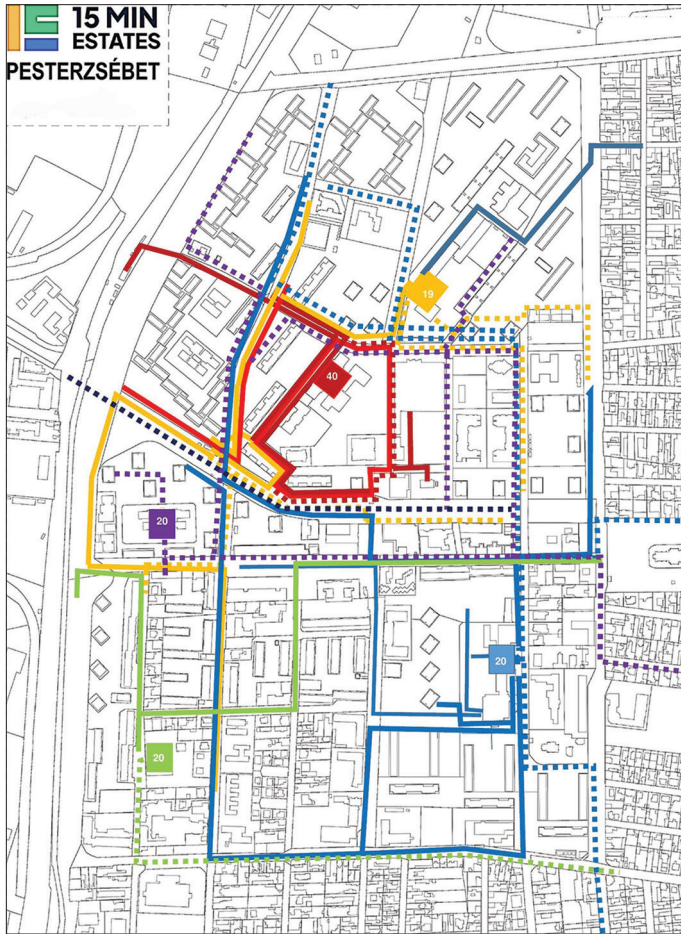


Fig. 6. Preferred pedestrian routes,  $n = 119$ . Different coloured squares on the map: Schools and kindergartens included in the survey with the number of respondents. Preferred routes from kindergarten/school children accompanied by parents (dotted lines with different colours), versus unaccompanied minors (solid lines with different colours). Source: Authors' own compilation.

feel safe and comfortable when using such spaces in their everyday lives. In the decades preceding the change of regime, housing estates proved their suitability for improving the quality of life of the local community and their ability to function as an inclusive environment (see also VAN KEMPEN, R. *et al.* 2005).

According to our findings, housing estates and their public spaces are not inclusive environments in terms of how the population uses space today. The results of the walking interviews revealed that the development of public

spaces has not kept pace with the challenges of the modern era, leading different generations to use the available space in different ways, which in turn leads to intergenerational social conflicts (see also LEVIN, I. *et al.* 2014, and GRUNDSTRÖM, K. and LELÉVRIER, C. 2023). Several theories exist for resolving such conflicts; however, due to the local context, neither the nested commons theory (community-based management of the area – LI, W. and KERVEN, C. 2024) nor gentrification (or, more precisely, in our case, the lack thereof) can provide a solution to these con-

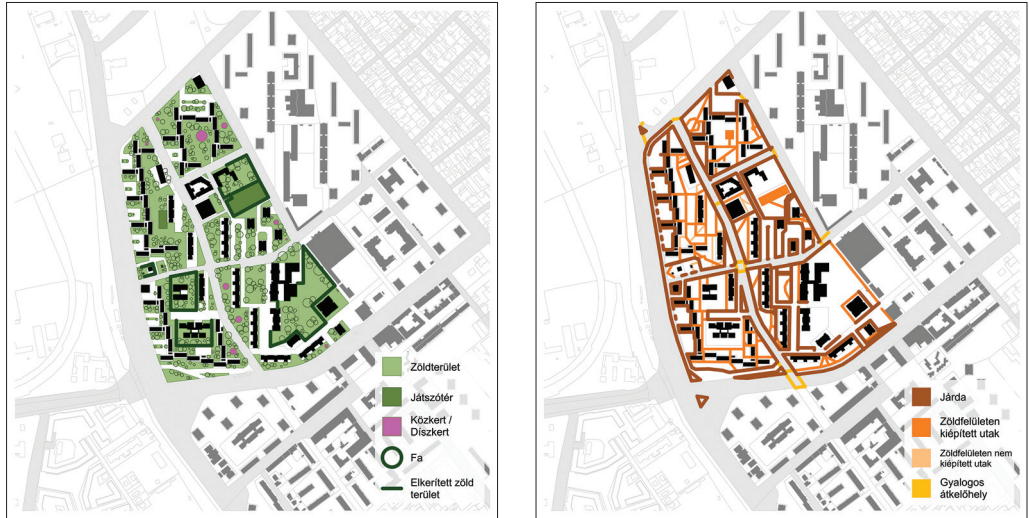


Fig. 7. Green space system (left), and extensive pedestrian network (right) within the block.

Source: Architecture student Borbála BALASI.

flicts. However, adapting the Swedish “smorgasbord of places” model could represent a step forward, as it has gained traction amid hostility toward shared public spaces in residential urban areas (WARWICK, E. and LEES, L. 2022; BIDDULPH, R. and SANDBERG, M. 2024). Under this model, the network of public spaces would be used by the relevant social groups according to a defined, informal set of rules.

Results of the questionnaire survey show that the general sense of security in public spaces in housing estates is favorable and that the assessment of public safety is generally positive, and the difference between men and women is less pronounced in the under-25 age group. Perceptions of safety are also positive among the older age group. However, sophisticated results of the qualitative methods testified that women, young people, and parents with small children in particular avoid the internal pedestrian routes that cut through housing estates and prefer traditional streets with heavy motor vehicle traffic.

Feelings of exclusion and insecurity are also generated by the poor model of space use. Public spaces that give the impression

of being abandoned and underused increase the feeling of insecurity and further select the circle of space users, excluding more vulnerable groups (PERRIGO, J.L. *et al.* 2025).

Our findings call into question the success of the design intention often used and emphasised in the construction of housing estates, namely that protected routes and pedestrian networks contribute to improving the quality of life in housing estates. The carefully planned, segregated traffic system and protected green spaces of housing estates have now lost their community-building role. The loss of function of previously intensively used community spaces, the lack of personalisation, and the weakening of social relationships directly contribute to a deterioration in the sense of security, especially among women. International research clearly supports the view that fear-related behaviour patterns stem not primarily from an objective fear of crime, but from weak social cohesion in the residential environment (FERRARO, K.F. 1995; SAMPSON, R.J. *et al.* 1997).

Returning to the questions posed in the introduction, the public spaces of housing

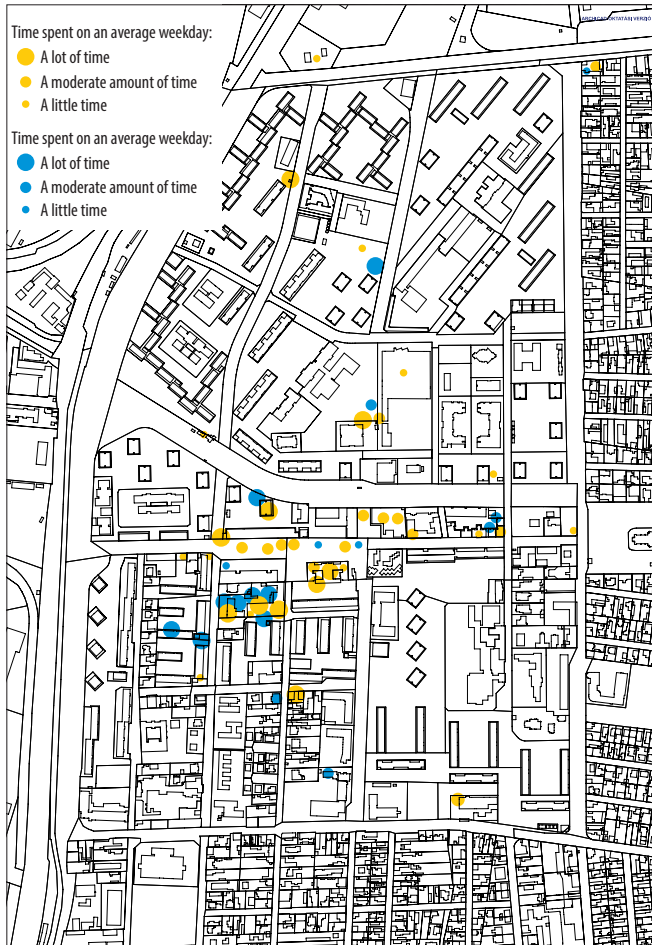


Fig. 8. Notable places of space utilisation on an average weekday and a weekend day. Time spent on an average weekday (yellow), and on an average weekend day (blue),  $n = 78$ . Source: Co-Housing Budapest Association and authors' own compilation.

estates, which were once designed and used with a strong sense of community, have lost their former positive, integrating role in our case. This process was one of the consequences of the end of state socialism. The ownership structure changed, and the population shift intensified after the change of regime (GORCZYCA, K. 2016). The wealthier younger generations moved away and were replaced by lower-middle-class young families with small children in a kind of a reverse gentrification. With the end of the intensive use of

public spaces, community control over public areas faded out. The fluctuation within housing estate communities significantly reshapes the cohesion of the local community. The cohesion is lacking among the newly arrived, often transitory population (HAASE, A. *et al.* 2012). As a result of changed social habits, newly arrived groups typically use public spaces only for transportation. But they don't do this as freely and intensively as the morphology of the development and the logic of the internal functional layout of



Fig. 9. Location of good and bad places in the housing estate. Good places are marked with green, bad places with red, n = 78. Source: Co-Housing Budapest Association and authors' own compilation.

the area would dictate. Or as was originally the case in the first decades after the housing estate was built. Thus, the small number of pedestrians passing through further exacerbates the marginalisation of public spaces.

The spatial openness of the development and public space system, designed according to modernist principles, is a great advantage. The ownership situation, whereby the public spaces are still owned by the local council, is also a good opportunity. The potential inherent in these is exploited in few housing estates (OUŘEDNÍČEK, M. and KOPECKÁ, Z. 2023).

The development of large, unstructured, often poorly controlled, and therefore unsafe public spaces into areas with specific uses (outdoor barbecue, community garden, playground for teenagers, etc.) has several advantages. Community content can return to public spaces that are increasingly becoming „no man’s land“, allowing these areas to regain their community-building and strengthening role, thus, allowing a responsible and caring attitude to regain ground. The impact of community control over public spaces that are put back into use can also spill over into the wider environment. By putting the area back into use (revitalising it) and filling it with living functions, control and, through this, public safety will also improve (FRIEDRICH, K. and RÖSSLER, S. 2023).

## Conclusions

Over the past two decades, research on public spaces has increasingly become a focal point of urban studies. In the case of housing estates, the condition of public spaces plays a particularly significant role, since public spaces significantly determine the housing market situation of housing estates. The design and organisation of public spaces fundamentally influence the image formed by those living in and outside the housing estate (SENDI, R. *et al.* 2009). The condition and use of public spaces fundamentally influence residents’ opinions about the quality of life. Improving public spaces and promoting their use encour-

ages residents to participate more actively in local community life, while also improving the health and well-being of the population (RASWOL, L.M. 2018; YUSSUF, S.O. *et al.* 2021).

The fundamental aim of our research was to examine how the freely accessible, open to all, and, in the past, truly inclusive public space system, which was realised through modernist architectural ideas and state socialist urban development, functions today. Do public spaces still provide equal opportunities for users of different ages and genders in their current use, as was typical at the time of their design? Can the original design intent still be realised?

Returning to our research questions, our findings indicate that the use of public spaces in housing estates underwent a significant transformation following the political transition. In Hungary and Budapest, the community-building role and community-forming power of public spaces gradually faded in the large-panel housing estates of the 1970s. This process was particularly characteristic of prefabricated housing estates in unfavourable housing market positions, such as the Pesterzsébet Central Housing Estate, where the unfavourable real estate market situation is coupled with a less family-friendly environment. Social conflicts have emerged regarding the use of public spaces (the coexistence of young and elderly residents), and the active use of public spaces by mothers with young children, a characteristic of the area for decades, is on the decline or is often spatially restricted or increasingly limited.

The transformation and decline in the use of public spaces can be attributed to a decrease in the sense of security and an increase in the sense of insecurity. These problems are particularly evident among young and middle-aged women. Avoiding enclosed indoor spaces and less-trafficked streets – previously hailed as major advantages – has emerged as a defensive mechanism. The mobility of young people, and mothers with small children has increasingly shifted to the vicinity of major transportation routes, which runs counter to the original design objectives of the housing estates.

In order to improve land use, we recommend developing a target group-centric strategy based on the needs, fears, and opinions of the most vulnerable groups (young and middle-aged women). The active involvement of women and young people in planning processes can also bring specific spatial design considerations into the scientific and urban development discourse that are irrelevant to other members of the community (e.g. good lighting, informal supervision, transparent spaces, visual control, specific planting considerations).

In the longer term, developing a comprehensive urban regeneration strategy for the area – one that aims to revitalize the physical, social, and economic environments collectively – could represent a step forward. Improving the quality of green spaces could play a key role in the physical renewal of public spaces, while in the social sphere, the use of “smorgasbord of places”-type interventions could offer a solution. By developing services located on the ground floors of housing estates, we can achieve not only economic benefits but also advantages in terms of land use (mobility). MORENO’s interpretation of the 15-minute city concept in a housing estate environment highlights that liveable and safe public spaces are not merely the result of physical interventions but are closely linked to the functioning of local communities and the strength of social relations (MORENO, C. 2024).

The solution to this situation lies in a two-pronged approach. On the one hand, there is a need for bottom-up development that takes into account the needs of the local community, and on the other hand, there is a need to integrate and moderate from above the potential and social capital inherent in the local community (LANG, R. and NOVY, A. 2014). In this way, public spaces – which are increasingly coming to resemble no man’s land – can once again become liveable areas that serve a community purpose.

We plan to conduct further research to explore in more detail the use and needs of minors, young children who already travel alone, and young adolescents. Future prefer-

ence studies allow to map the various needs of public spaces from multiple perspectives (age, gender and function). Our research can contribute to identifying future trends in the use of public spaces in housing estates.

Our findings have highlighted the need to rethink the top-down planning approach that remains prevalent in Central and Eastern Europe. Instead of paternalistic, state-led “welfare” developments, greater attention must be paid to underutilized local resources and better harnessing the potential inherent in local society, as well as to closer cooperation with local communities.

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