

GOING GREEN-LESS: A MORPHOLOGICAL AND FUNCTIONAL STUDY OF DECREASING GREEN PUBLIC SPACES IN NOVI BEOGRAD, SERBIA

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ABSTRACT

The approach to urban planning and development of public spaces supporting healthy lifestyles and well-being within the wider context of green infrastructure in Belgrade, Serbia, has undergone an observable and measurable shift. Various factors have contributed to a decline in the planning and implementation of these spaces, particularly for newly designed residential developments, with the most significant prominence observed since the beginning of the 21st century.

This paper seeks to examine the spatial and non-spatial factors that contributed to the decrease in the previously established urban planning approach for green public spaces. Changes in laws and regulations, transformation in lifestyle perspectives, and the impact of globalization can all be attributed to the resulting spatial impacts. This paper will utilize five case studies, focusing on residential blocks within the Novi Beograd municipality (Blocks 19a, Block 30, Block A, Belville and West 65), to illustrate the shift in urban planning perspective and its outcomes. Through a comparative study of these cases, a clear change in approach when conceiving and implementing green public spaces is demonstrated.

In addition to providing a comprehensive overview of the resulting spatial impacts stemming from the examined changes in perspective, this research will present a set of applicable guidelines for future developments, encompassing both theoretical and practical aspects. As urban planning practices for new developments increasingly disregard the requirements of public spaces that support healthy lifestyles, notably in human interaction and well-being, this topic remains continuously relevant.

KEYWORDS *_ public space, green infrastructure, urban planning, Novi Beograd, well-being*

Introduction

Building upon previous scholarly research, particularly Simić (2022), this paper aims to examine the spatial and non-spatial factors that have contributed to the decline of the established urban planning approach for green public spaces. It establishes a connection between capital-driven urban planning strategies, commonly referred to as “investor urbanism,” and the relationship between green spaces in contemporary cities and the well-being of their residents.

Through a comparative analysis of five case studies focusing on residential blocks within the Novi Beograd municipality (Blocks 19a, 30, Block A, Belville and West 65), the paper aims to illustrate the shift in urban planning perspectives and its resulting outcomes.

It argues that green spaces, such as parks, are essential components of urban design practices for contemporary cities. The inclusion of green spaces in urban environments provides numerous benefits that enhance residents’ overall quality of life and contribute to the sustainability and resilience of cities (Sano, Filipović, and Radović 2020). However, when confronted with capital-driven urban planning, there is a significant influence on the development of contemporary cities, shaping their physical form, social dynamics, and overall character. This approach prioritizes the interests of private investors, developers, and corporations, often at the expense of public welfare and long-term sustainability.

In conclusion, the paper emphasizes the importance of incorporating green spaces into urban design practices for contemporary cities. These spaces not only provide opportunities for physical activity, social interaction, and relaxation but also contribute to environmental sustainability, biodiversity, and overall well-being. Green spaces are key elements that help create livable, resilient, and thriving cities for present and future generations.

CONTEXTUALIZATION: BELGRADE AND “INVESTOR URBANISM”

“Over the last several decades, historically established quality was increasingly sacrificed, in favor of ‘universal’ typologies, which are, in the name of globalization and single bottom line, destroying cities worldwide” (Radović, 2012. pp. 107)

Cities play a central role as the primary drivers of environmental and ecosystem disturbances on our planet. Their substantial ecological footprint and insatiable resource demands make them the largest emitters of greenhouse gases and significant sources of water and air pollution (Simić, 2022). Globalization has further contributed to the erosion of site-specific strategies and the adoption of urban planning laws and regulations that may not necessarily benefit cities (see e.g.: Exenberger et al., 2013; Khazaei et al., 2015; Kara, 2019).

Scientific studies and measurements conducted in urban areas consistently demonstrate a proportional relationship between the extent of artificial non-porous cover, such as concrete, asphalt, and cement boards, and the amplified heat island effect, as well as more severe flooding following rainfall. Additionally, the degradation and fragmentation of natural areas hinder the future development of green infrastructure in cities, which is a crucial strategy for adapting to climate change and revitalizing urban ecosystems (Simić, 2022).

In the context of Belgrade, the term “investor urbanism” colloquially refers to the planned and unplanned development that has taken place over the past three decades, particularly in the Novi Beograd municipality, with its architecture and urban planning rooted in modernist manifestos and concepts (Blagojević, 2007). However, in the late 1990s and early 2000s, during a time of political transition in Serbia, the developmental intention shifted significantly. While the exact definition of the term remains debatable, in this case, it can be defined as a practice that prioritizes investors’ interests and profit at the expense of the public interest and other stakeholders in urban life (Simić,

2022). The era of investor urbanism in Belgrade began in the early 2000s, coinciding with significant socioeconomic transitions that are still ongoing. The clash between the deeply rooted socialist city planning system and neoliberal reforms aimed at introducing free market principles and private capital has had unfortunate consequences for the state and its citizens. The motivation of developers to set up 'open vacant spaces' is simple: the goal is to increase the total floor area, not to produce high-quality public spaces for people (Suzuki, 2014).

The planning system and urban planning parameters have become hindrances, with planners and urban developers seen as adversaries by the new construction elite who perceive them as impeding and limiting their construction boom. However, it is important to note that the regulatory and planning system has proven to be slow and unable to keep up with the pace of changes. Planning regulations have become outdated and inadequate for the current market conditions, where the state no longer serves as the primary investor. Moreover, the state's involvement in construction, particularly in the housing sector, has significantly diminished. Outdated regulations and standards from the socialist era pose numerous challenges for present-day investors (Simić, 2022).

The absence of green regulations exacerbates the issue. As cities undergo inevitable growth and development processes (as stagnation would be detrimental), the pressure on available public and private construction sites intensifies due to population growth and corresponding needs and activities. Consequently, the reduction of undeveloped areas and natural land cover becomes unavoidable. However, the regulatory-planning system can control the patterns and intensity of construction through parameters such as the built-up index, occupancy percentage, and the allocation and quality of green spaces (Simić, 2022).

GREEN CITY SPACES AND WELL-BEING

In this paper, the concept of well-being holds significant importance and will be examined in relation to urban planning practices for green spaces. The analysis will consider specific contextual factors, including spatial and socioeconomic aspects, that characterize the presented case studies.

Well-being can be defined as a state of happiness and contentment, characterized by low levels of distress, overall good physical and mental health, and a positive outlook or high quality of life (Diener et al., 1997; Veenhoven, 2008). Essentially, well-being is about perceiving life in a positive light and experiencing an overall sense of well-being.

By focusing on well-being within the context of urban planning for green spaces, this research recognizes the crucial role that the built environment plays in shaping the quality of life for individuals and communities. The presence and accessibility of green spaces in cities have been linked to numerous benefits that contribute to well-being. These benefits include opportunities for physical activity, social interaction, relaxation, and a connection with nature.

Urban planning practices that prioritize and integrate green spaces into the urban fabric can significantly enhance the well-being of residents. Green spaces provide opportunities for people to engage in physical activities such as walking, jogging, or cycling, which have positive effects on physical health and mental well-being. These spaces also serve as social gathering places, fostering a sense of community and promoting social interaction among residents. Moreover, green spaces have been shown to have a positive impact on mental health and emotional well-being. Access to nature and green environments has been associated with stress reduction, improved mood, and enhanced cognitive function.

By examining the interplay between well-being and urban planning practices for green spaces, this research aims to highlight the importance of integrating these spaces into urban design. It emphasizes the need for urban planners to prioritize the creation and preservation of green spaces in order to promote well-being, create healthier communities, and improve the overall quality of life.

CASE STUDIES

This research presents a further investigation of five residential blocks (Blocks 19a, Block 30, Block A, Belville, and West 65) in the Novi Beograd municipality. These blocks were selected to reflect the development processes and showcase the pressure on available public and private construction sites resulting from population growth and corresponding needs and activities. Consequently, the reduction of undeveloped areas and natural land cover becomes unavoidable (Simić, 2022).

To examine the presented studies, the grounded theory for architectural and urban planning research was utilized. The application of this method expresses the value of daily life demonstrated by architectural composition. Moreover, a spatial analysis of a phenomenon can contribute to the development of new substantive theories and concepts (Lianto, 2019). The observation step presented in this paper involves observation, drawing, and mapping. Relevant criteria, such as the percentage of greenery, its type, maintenance levels, presence of urban furniture, and any adjoining functions (such as shops offering various goods and services), were utilized.

The following observational criteria, elected as relevant for this research was utilized: the percentage of greenery, with additional definition of its type and maintenance levels, presence of urban furniture and noting any adjoining functions (shops with various good and services).

Block 19a

Completed in 1981, this block is recognizable by its diagonal matrix. The percentage of greenery stands at approx. 65%, its type is both high and low, not maintained. Urban furniture is present, such as benches and children's park, but worn out and not maintained. Adjoining functions are not present.

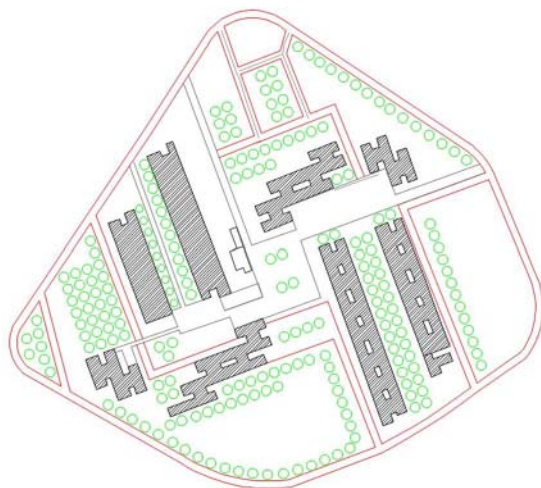


Figure 1: Block 19a – diagram. Source: ©Kosta Stojanović;

Figure 2: Block 19a – site. Source: ©Kosta Stojanović

Block 30

The percentage of greenery stands at approx. 55%, its type is both high and low, not maintained. Urban furniture is present, such as benches and children's park, but worn out and not maintained. Adjoining functions are not present on the ground floor, but they are located on the perimeter of the block.

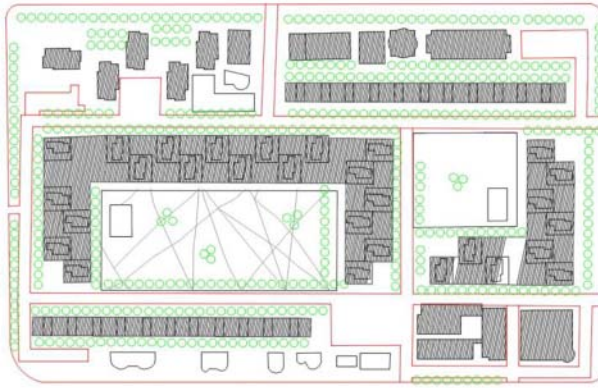


Figure 3: Block 30 – diagram. Source: ©Kosta Stojanović;
Figure 4: Block 30 – site. Source: ©Kosta Stojanović

Belville

The percentage of greenery stands at approx. 15%, its type is both high (with high trees somewhat lacking) and low, with emphasis on manured shrubbery, well-maintained. Urban furniture is present, such as children's park and a running track, well-maintained. Adjoining functions are present and plentiful on the ground floor.



Figure 5: Block Belville – diagram. Source: ©Kosta Stojanović;
Figure 6: Block Belville – site. Source: ©Kosta Stojanović

Block A

Completed in 2019, it is a representative example of construction in the style of “mature” investor urbanism, where the skill of finding loopholes in planning regulations and omitting all unprofitable elements of the block, especially greenery with natural soil, has been raised to the level of virtuosity (Simić, 2022).

The percentage of greenery stands at approx. 10%, with emphasis on low, since high greenery is sparsely present, but well-maintained. Urban furniture is present, such as benches and children's park, well-maintained. Adjoining functions are present on the ground floor - shops, hairdressers, restaurants, cafes, etc.

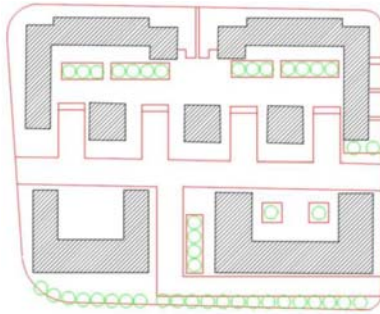


Figure 7: Block A – diagram. Source: ©Kosta Stojanović;
Figure 8: Block A – site. Source: ©Google Maps (street view): https://www.google.com/maps/@44.8055287,20.4016722,3a,90y,14.57h,101.44t/data=!3m6!1e1!3m4!1sdwjZS_NG_5XuU5qNG3Homg!2e0!7i13312!8i6656?hl=en&entry=ttu.

West 65

Completed in 2022, similarly to Block A, this space has its green spaces whittled down to a bare minimum. The percentage of greenery stands at less than 10%, with both high and low greenery, well-maintained. Urban furniture is present, materialized in only benches and a fountain. Adjoining functions are present on the ground floor - shops, hairdressers, restaurants, cafes, etc.

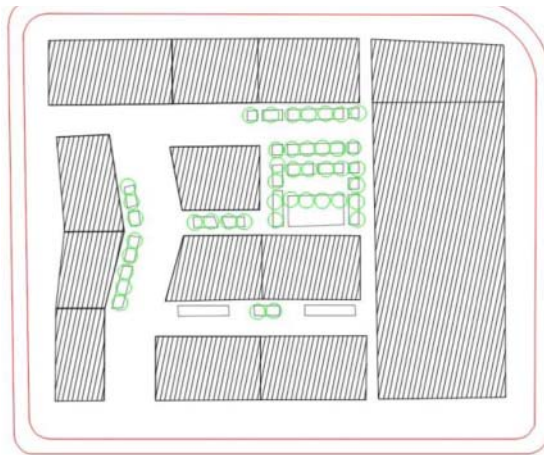


Figure 9: Block West 65 – diagram. Source: ©Kosta Stojanović;
Figure 10: Block West 65 – site. Source: ©Kosta Stojanović

Table 1: Comparative data analysis

SITE	Greenery (%)	Greenery (high/low)	Greenery maintained (Y/N)	Urban furniture (Y/N)	Adjoining functions (Y/N)
Block 19a	65%	high/low	N	Y	N
Block 30	55%	high/low	N	Y	N
Belville	15%	low	Y	Y	Y
Block A	10%	low	Y	Y	Y
West 65	>10%	high/low	Y	Y	Y

CONCLUSION

The research conducted in this paper highlights the importance of considering spatial and non-spatial factors in urban planning practices for green public spaces. It establishes a connection between capital-driven urban planning strategies, referred to as "investor urbanism," and the well-being of residents in contemporary cities. The findings emphasize the need for a comprehensive and integrated approach to implementing greening strategies, involving collaboration among stakeholders and long-term commitment from city governments.

The study underscores the significance of green spaces in promoting environmental sustainability and enhancing the quality of life in cities. It recognizes that green spaces play a crucial role in mitigating the impacts of urbanization and climate change. By integrating green spaces into urban planning, cities can contribute to the overall well-being of their residents.

One of the key conclusions drawn from the research is the positive impact of green spaces on mental well-being. Access to green spaces provides opportunities for physical activity, which promotes a healthy lifestyle and contributes to overall well-being. Additionally, spending time in nature-like environments has been shown to reduce stress, improve mood, enhance cognitive function, and support better mental health.

To effectively implement greening strategies, it is essential for cities to prioritize the maintenance and enhancement of green spaces. This requires ongoing efforts and collaboration to ensure the availability and accessibility of green spaces in residential neighbourhoods and throughout the city. By recognizing the multiple benefits of green spaces and incorporating them into urban planning practices, cities can create healthier, more sustainable, and liveable environments for their residents.

In conclusion, this research emphasizes the importance of considering green spaces in urban planning practices. The findings highlight their contribution to environmental sustainability, quality of life, and mental well-being. By incorporating greening strategies, cities can create more resilient and inclusive urban environments that prioritize the well-being of their residents.

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REFERENCES

- Blagojević, Ljiljana. 2007. *Novi Beograd: Osporeni Modernizam*.
- Exenberger, Andreas. n.d. "Globalization and the City: Two Connected Phenomena in Past and Present." <http://books.openedition.org/iup/1352>.
- Lianto, Fermanto. 2019. "Grounded Theory Methodology in Architectural Research." *Journal of Physics* 1179 (July): 012102. <https://doi.org/10.1088/1742-6596/1179/1/012102>.
- Kara, Beyhan. 2019. "The Impact of Globalization on Cities." *Journal of Contemporary Urban Affairs* 3 (2): 108–13. <https://doi.org/10.25034/ijcua.2018.4707>.
- Khazaei, M., Darabi, S., Abdi, J. (2015). Globalization and its Ambivalent Effects on Cities. *Journal of Applied Environmental and Biological Sciences*. 5(9S), pp. 821-829.
- Radović, Darko and Davisi Boontharm (Eds.). 2012. *Small Tokyo*. Tokyo: Flick Studio.
- Sano, Satoshi, Filipović, Ivan, and Radović, Darko. 2020. "Public-Private Interaction in Low-Rise, High-Density Tokyo. A Morphological and Functional Study of Contemporary Residential Row-Houses." *The Journal of*

Public Space, no. Vol. 5 n. 2 (April): 63–88. <https://doi.org/10.32891/jps.v5i2.1285>.

- Simić, Ivan. 2022. "Investitorski Urbanizam vs Klimatske Promene – Kako Novobeogradski Blokovi Ostaju Bez Zelenila?" *Klima 101*. May 17, 2022. Accessed June 10, 2023. https://klima101.rs/investitorski-urbanizam-zelenilo-novi-beograd/?fbclid=IwAR3vFUX-1V0UKYnFC6BrdENN4PSER5JpAvLiGg6ybX3NCI35_2gX-ZZXDY.
- Suzuki, R. (2014). *Rethinking the floor area ratio easing legal system that creates Kokai-Kuchi*. Tokyo Metropolitan University.
- Veenhoven, R. (2006). The four qualities of life. Ordering concepts and measures of the good life. In McGillivray, Mark, and Matthew Clarke. 2007. *Understanding Human Well-Being*. <https://collections.unu.edu/eserv/UNU:2471/pdf9789280811308.pdf>. Pp.74-100.