

RESIDENTIAL SPACE AS CHANGEABLE AND RESILIENT POLYGON FOR FUTURE LIVING

Borjan Brankov

Institute of Architecture and Urban&Spatial Planning of Serbia, Serbia

Research Assistant

Marina Nenковиć-Riznić

Institute of Architecture and Urban&Spatial Planning of Serbia, Serbia, PhD.,

Senior Research Associate

Mila Pucar

Institute of Architecture and Urban&Spatial Planning of Serbia,

Full member of the Academy of Engineering Sciences of Serbia (AESS), Serbia, PhD.,

Principal Research Fellow

INTRODUCTION

- In the past 100 years – architecture is seen as a tool to minimize the economy and housing shortage crisis after both World wars
- In the 1960s - architecture became a polygon for testing new, partly futuristic, living concepts and ideas
- In this sense the complexity of architecture and especially housing is in anticipating the further development of (residential) space
- Aspirations in housing to adapt to dynamic social changes can be recognized in multifamily housing during the 20th century
- At the same time, the importance of common activities and spaces is emphasized in the design of multi-family housing

- Common spaces are used and seen in different (multi-family) layers:
 - Building
 - nearby surroundings
 - residential block

MULTI-FAMILY HOUSING DEVELOPMENT AND COMMON SPACE

- The development of multi-family housing was encouraged by social changes as a way not only as a response to the crisis in housing but also to present a resilient solution to possible future changes
- That shift happened during the 1950s and early 1960s, the market changed from necessity housing as a result of the Wars destruction to more resident awareness design
- Multi-family housing in Serbia starting in the late 1950s was focused on a new development with the concepts that empowered adaptability and flexibility, especially in the dwelling areas
- However, at the end of the 20th century, the quality in the housing in Serbia decreased, shift changed the relation to space itself, as anything outside of the dwelling wasn't seen as necessary as before

COLLECTIVE SPHERE AND COMMON SPACE IN MULTI-FAMILY HOUSING

- Multi-family housing is a typology that has a significant collective sphere
- These spaces in addition to the communication role can have other contents and be a domain for the collective activities of the residents
- The common spaces in housing are often not as diverse as might be desired or as much as they could be. They are often forced to serve minimal necessary activities.

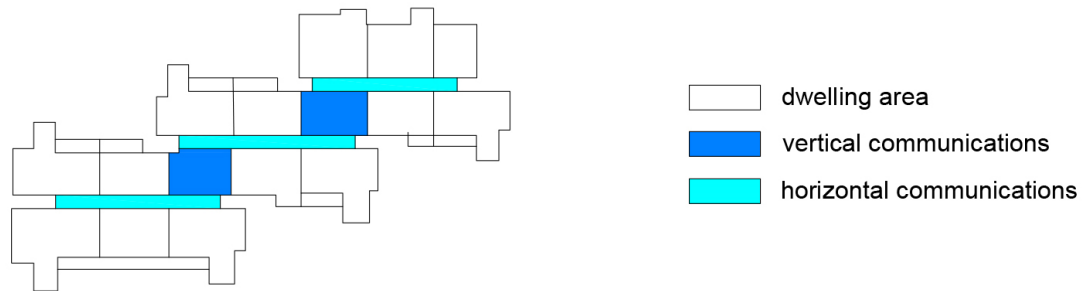
CASE STUDY OF BLOCK 22 IN NEW BELGRADE

- This block is part of the Central Zone of New Belgrade - next to blocks 21,23,28,29 and 30
- This area was selected for analysis as a significant block from the period of development of the New Belgrade in the second half of the 20th century
- The project of the block was made according to the competition from 1968 by the design of architects B. Janković, B. Karadzic, and A. Stjepanović



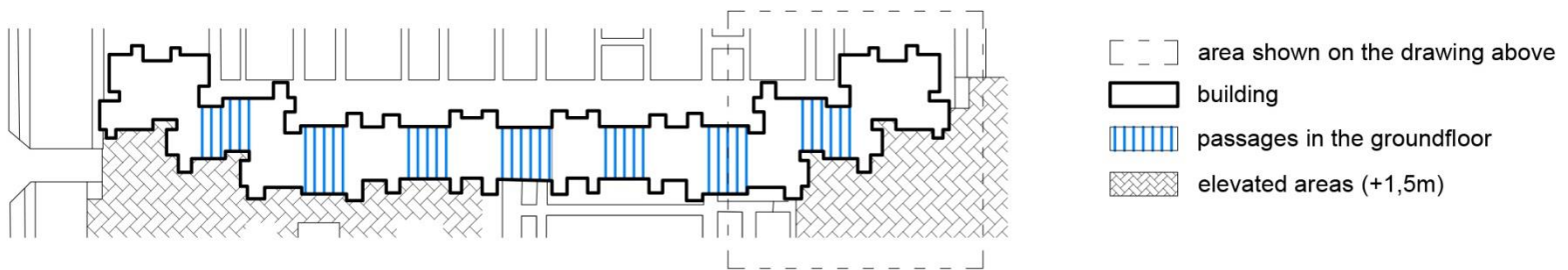
CASE STUDY OF BLOCK 22 IN NEW BELGRADE

- Block consists of 5 lamellas $P + 6 + Pk$ and the 2 groups of towers to the west $P + 4 + Pk$ to $P + 6 + Pk$
- Longitudinal buildings are especially interesting as they inside combine continuous hallways with the modular design of the dwellings. Every modular part has its formed passage on the ground floor that forms the entrance area.



CASE STUDY OF BLOCK 22 IN NEW BELGRADE

- Paper took the surrounding area of the building into analysis because of a couple of specific designs of the block and buildings itself:
 - passages through the buildings' ground floor
 - denivelated open spaces surrounded by groups of buildings.
- Denivelation and segmentation of open spaces uses half-buried garages to create common spaces above them for leisure and playground
- This directly influences the division of the whole block in 2 types of spaces: ground floor spaces (0,00m) – transit spaces and elevated common areas (+1,50m).



CASE STUDY OF BLOCK 22 IN NEW BELGRADE



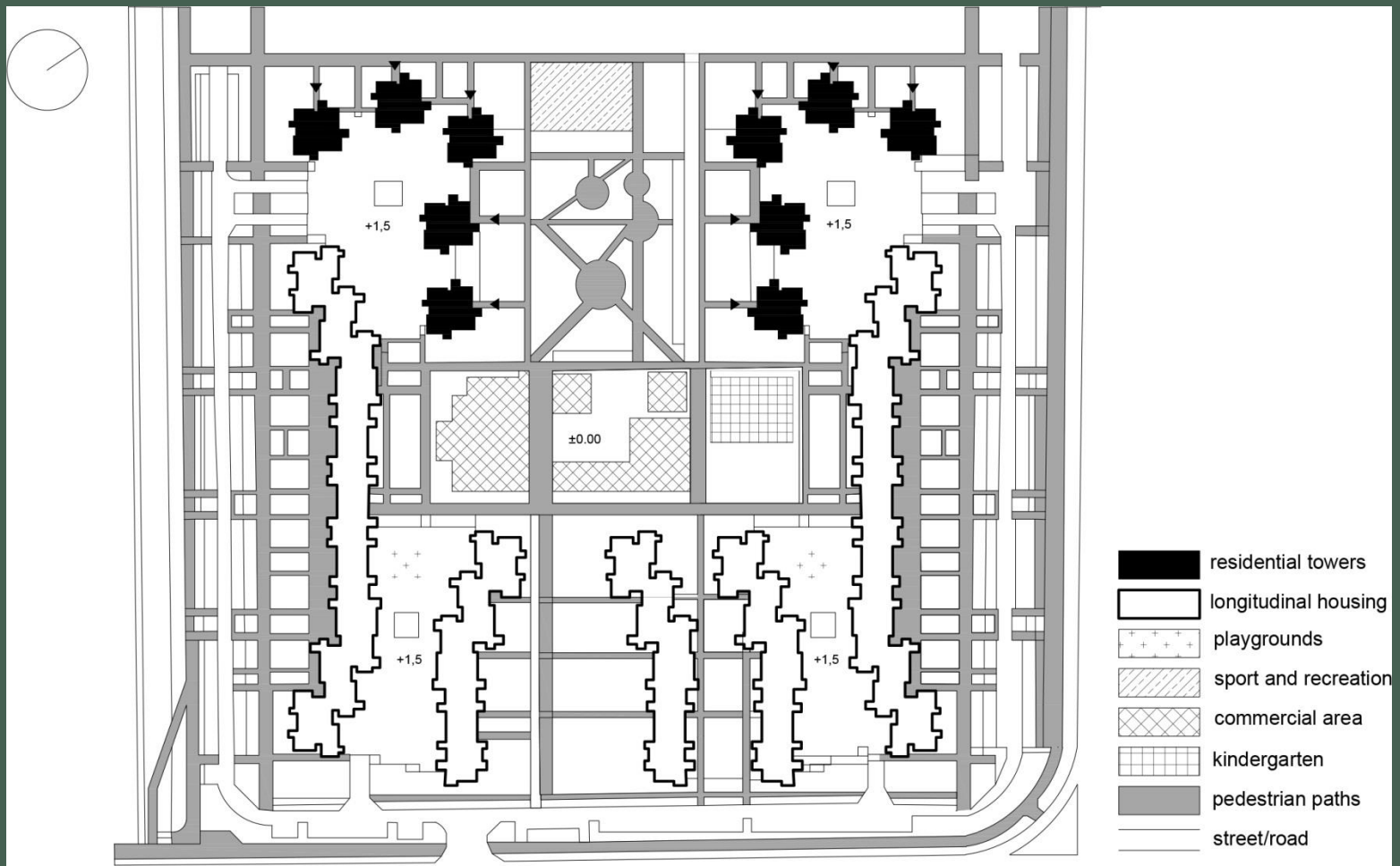
Image of the elevated common space (above garage in the Block), source: Authors



Pedestrian path in the Block that continues to the passage in the building, source: Authors

REPRESENTATION F THE WHOLE BLOCK 22

- The Block 22 in its central part has designed commercial facilities, a playground, and a kindergarten (school was planned but never built).



DISCUSSION AND RESULTS

- Resilience and adaptability in housing are more complex than in other architectural typologies
- Resilience in that sense not only should address problems surrounding urban development but should consider future changes in these spaces
- In this regard, Block 22 has various levels (3) of possible interventions the resilience in this sense can be in its current variety of spaces that give enough possibilities for the residents but also the future development that can upgrade and add new spaces and functions, which are compatible with the existing architectural design

RESILIENT POSSIBILITIES IN THREE SCALES IN BLOCK 22

| Analyzed scale | Residents focused on specific area (number of inhabitants/users) | Types of common spaces | Number of common spaces (diversity) | Percentage of common space that can be used for various activities (excluding residential part) | Privacy level (P-private area – restricted access in the building, PP - private public area, PB – public area) | Possible intervention as improvement of the common spaces - participation needed of residents | Amount of new functions that are possible in common spaces |
|--------------------------------|---|---|---|---|--|---|--|
| Building area | - smallest building: 90 inhabitants - biggest building: around 790 inhabitants | horizontal communications, vertical communications, passages, roof, common room near the stairs | around 2 common spaces on one typical floor | 17% | P | minor | small |
| Nearby building context | around 1000 inhabitants and users | passages, pedestrian area, elevated common area, greenery | 4-5 bigger common spaces nearby | 70% | PP | medium | medium |
| Residential block | around 3900 inhabitants and users | pedestrian area, green area, park commercial area, sports and recreation, elevated common area | 6-7 bigger common spaces | 83% | PB | full | medium |

FINAL REMARKS

- Design of the Block 22 addresses not only residential, but open spaces in a manner that anticipates possible future changes in this area
- The block itself is not designed as one big area, but in smaller zones, which can function independently (example of elevated common spaces) – this allows different activities to be held in different parts of the block.
- The conducted research opens the possibility for further examination of adaptability and resilience in existing blocks, especially in New Belgrade.
- One of the problems in New Belgrade blocks is the new building development which denies existing ideas of the urban scheme, green and non-built areas

THANK YOU

Borjan Brankov

Contact: borjan@iaus.ac.rs

Marina Nenković-Riznić

Contact: marina@iaus.ac.rs

Mila Pucar

Contact: pucarmila@gmail.com