

Title of the publication |

METROMILIEU:
Rural economy as a
relational gap between
inhabiting scales

Editors |

Ana Nikezić
Anđelka Bnin-Bninski
Pieter Versteegh

Publisher |

University of Belgrade -
Faculty of Architecture and
ARENA architectural research
network

For publisher |

Vladimir Lojanica

Reviewers |

Danijela Milovanović Rodić
Ksenija Petovar
Petar Vranić

Design and layout |

Aleksandra Milovanović

Number of copies |

100

Print |

Donat Graf d.o.o.

Place and year of issue |

Belgrade, 2021

ISBN-978-86-7924-222-8

METROMILIEU

**Rural economy as a relational gap
between inhabiting scales**

Editors:

Ana Nikezić

Anđelka Bnin-Bninski

Pieter Versteegh

CONTENT

PHENOMENONS

01 | 10-25

Assembling Rurality in the Metro-milieu

Michael **Woods**

02 | 26-35

Metromilieux and the Architecture of New Economies

Pieter **Versteegh**

CASE STUDIES: SERBIA

03 | 38-53

Human Scale Space and Polarised Communities: New Ruralities as New Forms of Reciprocity and Moderation within the Transition of Modernistic Landscape

Milica P. **Milojević**, Mladen **Pešić**

04 | 54-71

Through Logic to New Rurality: From Revitalization of the Existing Content to New Landmarks

Aleksandar **Videnović**, Miloš **Arandjelović**

CASE STUDIES: DENMARK

05 | 74-91

The Abandoned Rurality; Memories of Place Redeemed through Radical Preservation

Mo Michelsen Stochholm **Krag**

06 | 92-99

Managing Rurality

Anna Sofie **Hvid**

METHODS

07 | 102-111

Flexible Design Models as Generators of New (Alter) Forms of Rurality, to the Manifest of a Resilient City

Ksenija **Pantović**

08 | 112-133

Exploring Methods for Mapping Rurality in Housing Settlements: Cityscape vs. Landscape

Aleksandra **Milovanović**, Jelena **Basta**, Aleksandra **Đorđević**

09 | 134-148

The Role of Green Walls in Sustainable Urban Development

Budimir **Sudimac**

Part 4

METHODS

07

Flexible Design Models as Generators of New (Alter) Forms of Rurality, to the Manifest of a Resilient City

Ksenija **Pantović**

08

Exploring Methods for Mapping Rurality in Housing Settlements: Cityscape vs. Landscape

Aleksandra **Milovanović**, Jelena **Basta**, Aleksandra **Đorđević**

09

The Role of Green Walls in Sustainable Urban Development

Budimir **Sudimac**

Exploring Methods for Mapping Rurality in Housing Settlements: Cityscape vs. Landscape

Aleksandra **Milovanović**, Research Assistant, PhD Candidate (A.M.)

Jelena **Basta**, Teaching Assistant, PhD Candidate (J.B.)

Aleksandra **Dorđević**, Teaching Assistant, PhD (A.Đ.)

University of Belgrade - Faculty of Architecture

alekmil@arh.bg.ac.rs (A.M.); jelena.radosavljevic@arh.bg.ac.rs (J.B.); aleksandra.dj@arh.bg.ac.rs (A.Đ.)

The paper presents the research on methods and techniques for mapping rurality focused on identifying and re-examining the relations between cityscape and landscape within the typology of socialist housing. The research aims to provide new insights into the relationship between rurality and modernity at different levels: from the level of the comprehensive city territory to the single housing unit. The research subject is focused on housing settlements created based on the Master Plan of Belgrade from 1950 and 1972, with a particular focus on the relations of housing with the landscape structure and ecology. The result of the paper is a systematic presentation of techniques and methods for mapping different aspects of rurality through multiscale approach.

Key words: **rurality, modernity, socialist housing, landscape, Belgrade**

Introduction

The landscape, regarded in its broadest sense, represents a display of a particular time (de Botton, 2007), respectively the results of present and past ideologies in the urban tissue, further modified by culture, economy, and societies (Czepczynski, 2008). Having in mind that the paper is concerned with the development of socialist housing settlements, we will present in detail the relationship between the ideology of socialism and the landscape, in according with the close connection between ideology and urban planning as a whole.

To trace this relation, it is necessary to understand the notion of ideology interpreted by Slavoj Žižek who explains ideology from the Lacanian psychoanalytic theory that lies in the fact that the fear of an unknown brings people to a situation in which they create the images that could act as an expected reality, thus creating a time of harmony in cases where the antagonism dominates (Freeden, 2003).

The relation between aforementioned interpretation of ideology and planning can be observed through the constituent role of planning in the realization of ideology. According to Žižek, planning is an instrument used for the shaping of the ideology through articulation of how the population enjoys the use of their heritage, places, and surroundings seeking for a better future (Freeden, 2003). The ideological critique of planning is precisely the one that concerns Gunder, who believes that planning is in its essence ideological activity since ideology molds our chosen and dominant value system (Gunder, 2010). Taking into account that planning is the part of the politics, the question that arises is to what extent it is possible to segregate planners and other decision-makers from the political regime that is part of the decision-making system within which the planning takes place, especially in such strong political regimes as it was the case with the socialist one.

In order to fully understand the relationship between socialist ideology and planning, we believe that it is essential to understand the planning activity after the 2nd World War and the influence that the plans had on the housing and construction of residential settlements in Belgrade. In the first years after the war, the strive for socialist modernization was practiced through technological and economic development, based primarily on the socialist construction of a new society (Radosavljević, 2018). This modern society initially required the transformation of production models, the accomplishment of a certain level of professional-qualification status of the individual, establishment, and institutionalization of the social relations system and, as well a general change of perspective on the world and society. Having all those goals in mind, various changes in the institutional and regulatory context had to be introduced. In that time, the urban planning and spatial development issues were perceived as the key aspects and carriers of the changes. Introduced on the level of the federation of republics, social development plan was the main planning instrument that led to the achievement of a certain level of socio-economic development which further stimulated horizontal and vertical social mobility, emphasizing the importance of common interest based on the idea of self-management (Timotijević, 2012).

Five-year social development plans were followed by the development of documents of various importance, changes in laws perceived through the adoption or abolition

of particular provisions. For this paper, the *Third Social Plan* (1961-1965) has the highest importance for understanding present development trends. This plan, as the primary development issue, emphasizes the urbanization of cities and the need for more significant investment in raising the social standard, which, as mentioned above, was neglected during the period the establishment of a new state when the most substantial investments were focused on industry development (Timotijević, 2012). This plan illustrates the tendency towards decentralization of the administration to strengthen the local level and develop the social infrastructure under the general social growth. Regarding the design and construction of cities, the given period is characterized by the construction of residential buildings of social housing (Djokić, Ristić Trajković & Krstić, 2016) as well as the social infrastructure such as schools, kindergartens, health institutions, cultural centers, and other accompanying contents.

During the entire socialist period, satisfying the housing needs of the population was not only a real need of the employees in the industrial sector but the vital prerequisite for the achievement of an egalitarian society. Therefore, the housing policy was an integral part of the overall socio-economic development policy. The housing policy that was created in a given period represented, on the one hand, a response to social inequalities, entered into space through the pre-war institution of private ownership, but also an instrument for remedying the consequences of agrarian reform and intensive urban industrialization, which led to massive migrations of the working population from the villages to the cities. The results of migrations were also evident in the constant "shortage" of apartments in the cities throughout the period of socialism, thus setting the task for the urban planners and governmental bodies to develop various measures of housing policy such as the construction and distribution of social housing, as well as the establishment of the housing law institution. After the 2nd World War, the Belgrade population used to rise for 11,000 inhabitants a year.

Having in mind that providing living space was an important factor in achieving the desired social standard in the period of self-management socialism, socially oriented housing construction had conditioned the construction of about 10,000 housing units annually. This was one of the primary arguments for the analysis of housing settlements. In that order, research was structured according to the advancements in planning documents realization and implementation: Master Plan of Belgrade from 1950, Master Plan of Belgrade from 1972 and Period in between two plans.

The Plans, perceived as the regulatory basis for the expansion of the city territory, established the principles of the development of the landscape / rurality relations, which were later transferred to housing settlements built during this period. These principles are closely related to changes in the global plan and the adoption, or deviation from the global paradigms that were actual in that period. Accordingly, the *Master Plan from 1950* was the first socialist general urban plan that illustrated the team's decisions that worked on its development to transform the city into a modernist ideal of a functionalist city (Le Normand, 2014) that mainly encompassed the development of a new center on the left bank of the Sava River according to Le Corbusier's principles. On the other hand, the process of developing the *Master plan from 1972* follows the abandonment of the functionalist city and the adoption of planning models based on new techniques and methods for adopting decisions on the expansion of the city territory that included computer modeling and continual planning (Le Normand, 2014). The design and realization of these plans illustrates

the position of Yugoslavia on a global level, which, by adopting the model of the functionalist city in the 1950s and 1960s, coincided with the establishment of the socialist state modernization, while later in the development of the second plan, the orientation towards global trends and criticism of the functionalist city that was omnipresent by abandoning the mentioned model and adopting new methodologies.

2

Theoretical Framework

Scientific disciplines such as architecture and urbanism, social geography, urban sociology and landscape ecology discuss a series of questions about the relationship between the landscape and the morphogenesis of the urban environment in the context of urban development. In order to answer the questions about this relationship, it is necessary to produce knowledge about landscape transformation process and landscape dimensions, as well as the importance of nature in the city and its impact on the built environment on different spatial levels.

The perception, interpretation and description of the landscape have long been based on its passive nature. Within the framework of traditional geographic studies, the landscape is considered physical and objective, as an outer world that could be empirically accessible and analyzed (Hoskins, 1954; Bellentani, 2016). According to this approach, the landscape was analyzed by historical reconstruction and its evolution through the examination and recording of material facts about a certain part of the territory (Wylie, 2007). Within the framework of the *European Landscape Convention*, the landscape is defined „an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors” (Council of Europe, 2000). On the other side, Duncan (1990), leaving the aesthetic dimension aside, opens a perspective focused on viewing the landscape as a text, as a social and cultural document whose reading establishes the understanding of the layers and processes enumerated in the landscape. The reading of urban landscapes as an important goal of urban planners was previously highlighted by Lynch (1960) under the strong influence of mental map methods in the planning and cognitive geography. Such a perspective has opened up a much more dynamic textuality of the landscape dual-oriented: (1) to creativity, or future possibilities and unpredictable processes, and (2) to the memory, or to the individualized past, which enabled the analysis of the complexity of the social and cultural aspects at the level of the landscape (Lindström, Kull & Palang, 2014).

2.1

Development of Techniques for Studying Landscape Ecology: Mapping and Scaling

In order to understand the dynamic nature of the landscape, a significant contribution is found within the methodological apparatus of landscape ecology with a particular focus on studying the interaction between landscape processes and patterns. Landscape ecology as a scientific discipline originates from Carl Troll (1939; 1950; 1971), who for many years engaged in biological sciences, then focused on research in geography. His occupation of territorial ecological aspects has evolved thanks to the strong influence of the ecosystem concept and the study of the

landscape photographs taken from the air (Zonneveld, 1989). For the first time in 1939, Troll used the concept of landscape ecology and suggested a new landscape research technique in order to link patterns recorded by air photos to current ecology concepts. This orthographic technique quickly found practical application in various studies such as location studies, hydraulic engineering, mapping of terrain and land use planning. Later, in 1968, the landscape ecology was defined as “the study of the main complex relationships between the living communities and their environment in a certain part of the landscape”, connecting two dimensions: (1) spatial, horizontal dimension based on a geographical perspective and (2) functional, vertical dimension based on an environmental perspective (Troll, 1971). Overall, landscape ecology was developed on the intersection of well-established disciplines - geography, ecology and social anthropology (Wu, 2012), while in its further methodological and theoretical development it reached a focus on three basic characteristics of the region (Forman & Godron, 1986; Turner, 1989): (1) Structure: Study of spatial relations between the landscape elements, (2) Function: Study the interactions between the landscape properties, and (3) Changes: Study of changes in the structure and function of ecological mosaics over time.

Having in mind that the landscape consists of landscape elements (Forman & Godron, 1986; Dramstad, Olson & Forman, 1996), or spatial components that form the landscape, the largest part of the methodological techniques for studying the landscape is directed to a hierarchical perspective that implies the inclusion of all relevant spatial levels, or scaling from comprehensive landscape to landscape unit. The choice of relevant scales at the same time depends on the territorial framework, as well as on the criteria for research or planning. In this respect, the following models can be distinguished in landscape-ecological studies:

116

- (1) Micro-landscape (Wiens & Milne, 1989): It is based on a research on the relationship between patterns and processes with the aim of determining how the landscape elements are distributed in a wider system and how such a structure of the landscape affects the ecological processes;
- (2) Land-unit (Zonneveld, 1989): It is based on understanding the landscape as a system and follows a holistic approach that implies that the landscape consists of hierarchical units;
- (3) Patch-corridor-matrix (Forman, 1995): It is based on the research of relations between landscape elements in the form of points, lines and surfaces that can be found in various spatial-morphological and functional-content relations.

These study models have several common features: (1) the identification of relevant spatial units allows for more accurate performance of qualitative analyzes, (2) the results of the research can provide a more precise representation of the phenomenon being investigated, (3) experimental research can be more easily carried out, and (4) experiments observations can be applied to other smaller spatial units of research or planning.

2.2

Changing the Relationship between Urban and Rural in the Transformation of the Cityscape

The relation of the city and rural areas in its associated metropolitan area has, over time, transformed from an economic condition that is reflected in the production of

food and energy to the search for a new balance between the landscape and the built environment in contemporary society. Within numerous research on both rural and urban areas, the landscape is considered a hybrid phenomenon that includes not only nature, but also culture, society, economy and politics (White, 2004; Amoroso, 2014). Due to the increasing complexity of the aspects that influence the creation of the physiognomy of the landscape and its transformation from the natural to the cultural area, it is more difficult to establish a clear relation between urban and rural landscapes. Having in mind that in the contemporary studies an increasing number of authors recognize the landscape as a social construction, and that dynamic changes affect the development of the city's morphology, it also requires search for new approaches through which the appearance of the landscape, its origin and development are considered. In this sense, the basic aim of this paper is (1) to provide insights into the relationship between rurality and modernity at different levels: from the level of the overall city territory to the single housing unit and, (2) to present the research on methods and techniques for mapping rurality, that are focused on identifying and re-examining the relations between cityscape and landscape within the typology of socialist housing (Djokić et al, 2018).

3

Methodology

The research was conducted through several continual phases. The first part of the research relates to the establishment of the theoretical starting points in relation to which the attitude is taken on the issue of rurality and includes three main theses: (1) the landscape is considered as an ideological representation, (2) scaling and mapping are recognized as complementary methods for analysing the complexity of the landscape, and (3) the transformation of urban and rural landscapes will be considered through the development of housing patterns, in line with dominance of this transformation in the period of socialism and the creation of housing landscape.

The second part of the research was focused on a case study of the territorial framework of the administrative area of the Belgrade city with a focus on housing patterns developed on the basis of the *Master Plans from 1950 and 1972*. This part of the research was carried out by inspecting the primary source research - original plans and conducted studies relevant to the issue of rurality, as well as insight into the publishing activity of the subject period, the journal *Urbanism of Belgrade*, *Architecture Urbanism*, the *Bulletin of the Center for Housing and the Yearbook of the Belgrade City Museum*, which can be considered as a kind of report and record of the development of Belgrade.

In the third phase, a student workshop was created within which the methods and techniques for mapping rurality in housing settlements (Dragutinović et al, 2019) were tested on the basis of the established theoretical framework and subject of research. Workshop *Among Scales* was held as an extended part of the program of the Symposium: *Metro-Milieu: (Alter)Rurality As A Relational Gap Between Inhabiting Scales* with a research focus on nine housing settlements realized on the basis of the Master Plans from 1950 and 1972. The basic research approach within the workshop includes synchronized processes of research and learning - place-based (Nikezić & Marković, 2016), multi-scale and process-based education.

4

Research and Analysis

As already mentioned in the paper, the research is largely based on the examination of the Master plans of Belgrade from 1950 and 1972, which represented the impulse of socio-economic changes followed by the territorial development of the city, primarily by its expansion and attitude towards the landscape in the housing settlements development. Having in mind that each plan included the phase of preparation, adoption and realization, the information collected for the research are classified in three periods: (1) Period of development and implementation process of the Master plan from 1950, (2) Period between plans, and (3) Period of development and implementation process of the Master plan from 1972.

4.1

Period of the Development and Implementation Process of the Master Plan from 1950

118

The end of the 19th century and new regulations which prescribed the division of long and narrow agricultural plots, accelerated the transformation of the cityscape and general reduction of unbuilt areas. Since the housing presented the major part for the socio economic progress of the country, the General master plan was introduced. Highly based on the rational thinking and Ideas of the Athens charter, plan tendentiously presents the benefits of the green areas seen in better hygiene conditions, regulation of microclimate conditions and increasing closeness and approach to the "free nature" . The recreational character has been recognized as a secondary benefit. The plan envisioned the single buildings situated in the greenery (60 to 70% of the green area) aiming to reach 25m squares per citizens in future (Vrbanić, 1951). Regarding river area, the plan envisioned the green riverfront ranging from 100 to 200 meters of width. Furthermore, the plan highlights the fact that industrialization and urbanization of cities evidentially affected the decrease of green areas. On the other hand, the author of the plan chapter describes the importance of the tight connection with the land that citizens had in present time, especially regarding gardening and small-scale agriculture (Milinković, 1951). These rural aspects created the community that did not have a need for the large-scale parks and as a result had lack of the understanding and interest for the ideas of Emilijan Josimovic.

Regarding the relationship with the land and cityscape, it is worth mentioning that in 1950s, single story buildings made the 82.4% of the housing stock in Belgrade (Stojanović, 1954). As explained by the Stojanović (1970), yearly increase of the population couldn't be followed by the material development of the city. The number of citizens after the World War II was 313 000 while it reached 828 400 in 1964, which produced the state where 60.9% of all national investment was dedicated to housing construction (Miljkovic, 1964). Strongly influenced by the ideology of socialism and the idea to create the "new town" at the west, or more commonly known on the left bank of the Sava river, the changes of the landscape are justified by the rational arguments. The diagram of the topography of the terrain and nature

is used as an objective argument which at the same time both limits and directs the future development, while the architectural diagram is used as an instrument of persuasion. This diagram presents the testimony of how to create and display certain natural factors as rational and objective reasons and justifications for a political decision, such as the issue of city expansion. If we compare this situation with today's development of Belgrade, we will see that the nature of the relief did not prevent development on the southeast and south sides of Belgrade.

4.2

Period between Plans

The Master Plan of Belgrade was made in 1948-1949, adopted in 1950, envisaged the development of Belgrade in a thirty-year perspective. In 1966 the Belgrade City Assembly passed a decision on the revision of the Master Plan, after which it was established that the forecasted developments of the territory of Belgrade have already been fulfilled, and that the trend of demographic growth continues, so it was necessary to begin the development of the new Master Plan. The first step in the development of a new plan, in accordance with the principles of permanent and continuous planning, was to adapt the criteria and requirements of planning in line with the needs of the modern society by creating new capital studies and applying new planning methods. Leading research questions to establish new planning criteria included (1) the relationship between individual and collective housing, (2) the morphological principle of territorial development - a continuously built city or satellite city, (3) territorial expansion directions - in relation to geographical advantage or in relation to infrastructure development, and (4) the realization stages of the future plan.

119

Territory Classification in line with Rural Landscape

In this sense, one of the leading studies of the new Master Plan was related to the *Presentation of changes, interventions and actions in urban structures*, within which three types of territory were defined (Djordjević, 1969): (1) development territories - include terrains suitable for construction and expansion and areas suitable for the reconstruction of the existing urban structure, (2) completed (fixed) territories - include parts of a city that have historical or architectural value, as well as densely built urban structure, and (3) territories unfit for construction - areas with unfavorable geographical and ecological conditions, as well as natural reserves for city needs such as water, forests, national parks etc. The intention to achieve the typological categorization of urban areas has significantly contributed to the treatment of nature and rural, non-urbanized areas within the plans of different spatial levels.

Defining Territorial Units for Research and Planning: Block – Zone – Ring

Another problem in the process of preparation for the development of a new Master Plan was to determine spatial units of testing and observation, from the smallest to the largest spatial and territorial units. In order to establish a relationship with the city's existing morphology, the levels of territorial development are recognized (Aničin, 1969): (1) defined the static area of the narrower city territory, (2) the first

ring of the city area, which borders with the expected continuous boundary of the future morphogenesis, and (3) the second ring of the city area, which borders with the wider metropolitan area of the gravitating territory of the city. On the basis of the defined morphological levels of development in further studies, the area with the highest level of urbanity was referred as relevant for the research of spatial unit. The smallest unit of observation is recognized - block, regardless of its size or purpose, while the group of blocks makes the higher unit spatial level - zone. The significance of this classification into spatial units is in balance with the methodology and quality of research and planning, especially due to the fact that most of the previous studies were conducted in relation to the administrative classification that could be referents for demographic studies and the construction fund, but they are not sufficiently suitable for spatial-morphological and content-functional studies.

Defining Elements for Housing Development

One of the main problems recognized in this period was the issue of insufficient housing stock and housing organization in the city in relation to the increasing immigration of the rural population. In order to overcome the disproportion between the number of inhabitants and the existing housing stock, a *Study of the housing value in the city territory and a proposal for further development* was realized within the Urban Planning Institute (Karamata, 1969). Also, the preparation of the stage plan for the construction of Belgrade in the period from 1968 to 1971 indicated that the optimal directions for the development of the city in micro and macro dimensions are not spatially and temporally harmonized, which is a consequence of the methodology of planning through fragmentary solutions that are not harmonized at the level of comprehensive city territory (Tomić, 1969). The results of these studies have contributed to the introduction of interdisciplinary analytical approaches for planning, programming and design of complex housing construction, within which the understanding of housing is expanding.

“Contemporary understanding of housing implies, in addition to housing as a basic function, a whole range of other functions of significant development and reproduction of family and individual. This means that all aspects should be treated in a complex and synchronized manner, in equitable organic connection. Accordingly, the planning of complex housing construction aims to improve the overall environment and the continuous functional capability of the city as a whole, which is ultimately reflected and consists in the harmonious interconnection between work, housing and recreation. (Mendelson, 1974)”

Research developed within the Center for Housing has thus introduced multi-perspective approach to the understanding of housing settlements through (1) socio-economic impacts, (2) the impacts of the physical environment, and (3) the impact of the natural environment (Gavrilović, 1977).

Methodology for Landscape Planning

Although the tendency of the Master Plan of 1950 focused on increasing the greenery of 25m² / inhabitants, the realization of this idea was not successful, primarily because such standards were applied only in newly built residential areas, but not within the existing city urban structure. Also, there has always been a tendency to form an landscape of urban greenery in Belgrade, which was expressed even in the period between the World Wars through the garden city (Ćorović, 2009). On the other hand, the rapid development of an industrial society that increased the concentration of the population in urban areas, especially metropolitan areas, led to the search for new planning measures in order to reduce the exploitation of rural areas of marginal urban zones (Perišić, 1969). In order to establish new planning measures, the preparation of the *Plan of the Landscape in the whole metropolitan area of Belgrade*, as an integral part of the new Master Plan started within the Urban Planning Institute and the Republic Institute for Nature Protection of Serbia. Realization of the *Landscape plan of Belgrade* included the following significant methodological steps (Milinković, 1969): (1) systematization of the existing condition of the landscape, (2) analysis of the landscape characteristics according to all relevant aspects - biological and socioeconomic nature of the landscape, (3) evaluation of the landscape based on analysis, (4) classification of the landscape based on biological characteristics, (5) protecting and preserving the landscape in a future perspective, and (6) synchronizing the master plan and landscape plan.

The preparation period for the development of a new General Urban Plan included a series of significant studies that methodically contributed to the establishment of the relationship between regions and spatial patterns through (1) the classification of rural areas, (2) the definition of spatial units for research and planning, (3) defining elements for development of housing in line with natural benefits, and (4) synchronization of the landscape plan with the master plan.

4.3

Period of the Development and Implementation Process of the Master Plan from 1972

The process of creating the Master Plan from 1972 is mostly based on the collection and processing of documentation and data for planning the development of the territory of the city of Belgrade until 2000, which is recognized in a series of pre-developed studies in the period between plans (Milovanović, 2018). In order to comprehensively conceive the plan, 166 studies have been developed and classified into several thematic groups, out of which the following is the most important for the subject research: (1) General documentation about environment, (2) a Study on the sociological approach to the planning of the future development of Belgrade, and (3) the Study of external influences on the formation of the structure and organization of housing settlements.

General documentation about environment included, amongst the 25 studies, data on (1) favorable and unfavorable terrain for construction, (2) hydrology of the comprehensive territory of the city, (3) data on nature protection and natural objects with recommendations for spatial planning, as well as (4) the condition and needs of establishment of vegetation protection; and (5) documentation about the current

condition of the forest fund, weekend settlements, and more.

According to a *Study on the sociological approach to the planning of future development of Belgrade*, five spatial levels were identified for planning and design of housing (Djurović, 1969): (1) personal characteristics - imply demographic, sociological and economic aspects of individuals, social groups and the population as a whole, (2) housing unit - means the spatial level of everyday life and individualisation of users, (3) housing building - means a spatial structure that is a union of individual and collective needs, (4) housing settlement - implies a system of housing buildings and associated open spaces with a prominent role directed towards collectivism, and (5) the territory of the city of Belgrade - means a comprehensive system aimed at meeting the interests of the population.

According to the *Study of external influences on the formation of the structure and organization of housing buildings* in order to define the spatial conception of buildings and settlements in general, three types of housing settlements are distinguished from the relationship between landscape characteristics and housing patterns (Gavrilović, 1977): (1) type 1 - harmonization of housing patterns with the natural qualities of the site in morphological sense, (2) type 2 - dominance of physically constructed forms in relation to the characteristics of the landscape, and (3) type 3 - complementing of housing patterns and landscape resources.

The mentioned studies enabled the definition of goals in the development and organization of Belgrade until 2000 which influenced the creation of variants of planned solutions. Therefore, the initial urban development goals were originally created, of which, for the needs of analysis and reading the characteristic related to the landscape, goal number 4 is most relevant:

“ Provide to Belgrade become a healthy and pleasant city” - which means less pollution, more sunshine, air and greenery, less noise and aerosol. Avoid solutions that could endanger the health of residents. The main goal is to provide a healthy and pleasant environment by establishing a creative harmony of natural, built and social structures, with the protection and care of a living and inanimate nature. (Đorđević, 1972) ”

Based on this goal, the following guidelines were formulated in the implementation of the planned solution, which implied:

“ Improving the environment in the existing densely built and overpopulated zones of the city means reducing the excessive density of residential areas through the change of content and the introduction of elements of nature through the reconstruction of urban structure. In the spatial arrangement of residential areas, take into account the conditions of the natural environment and respect them, especially in zones of contradictory purposes (housing-industry and housing-traffic infrastructure) that need to be separated by the system of urban greenery. (Đorđević, 1972) ”

In addition, in the chapter specific objectives in certain areas, sectors and guidelines for their fulfillment, in terms of housing, conception started from the assumption that a healthy environment should be provided, (a) the optimal organization of basic structures in the space, (b) favorable mutual relationship and favorable relationship among other structures, as according to natural conditions and (c) to create as equitable conditions for life in the whole territory covered through the Master Plan. Based on the above assumptions the following goals have been set (Đorđević, 1972) (1) provide a standard of living in 2000 - 1 household / 1 housing unit, 1 room per resident, (2) provide healthy living conditions - physiological, psychological and sociological, and (3) provide the possibility of choosing a place of residence and a way of living.

As mentioned, the demographic assumptions about the growth of the population until 2000 caused the need for the construction of half a million new apartments, of which the smaller part implied the reconstruction of the existing housing stock, and the larger part implied construction of new residential areas, taking over the territory of about 18,000 ha. The realization of the mentioned goals implied the standard of living about 21m² / inhabitant. Having in mind the significance of solving the housing issue within the process of planning and expansion of the territory of Belgrade and deliberating the complex activities of housing, which, besides housing, includes the mobility, supply and use of services, recreation, social interactions and social activities, as well as the diversity of characteristics of Belgrade territory, a scale of dwelling density per zone predetermined as follows (Đorđević, 1972) (1) Small densities - single-family housing, (2) Medium densities - combined dwellings in single and multi-family housing, (3) Large densities - the highest percentage in multi-family housing, (4) Very large densities - exclusively multi-housing, and (5) Housing with additional activities - workspaces, public and social facilities.

The spatial distribution of these densities involved the mixing of small and medium densities in still un-constructed terrains and in existing settlements that would create a definite urban physiognomy with gradual transformation and the reconstruction of a specific character. Large densities are mainly planned in reconstruction process. Very large densities are planned in new terrains, while housing with additional activities is planned in areas of combining with workspaces, public and social facilities.

The chapter of the *Characteristics of the plan* explains in more detail the possibilities for the development of the city and the achievement of a certain quality of the city life, especially from the aspect of the environment, which illustrates the problems and potentials in the realization of the mentioned goal 4 - providing a healthy and pleasant environment. Pollution of water, air, high noise, overcrowding and excessive population density in certain parts of the city are indicators of the condition that can directly affect the health of the inhabitants. For this reason, the plan aimed to enable the creation of a positive trend in the development of the city and the optimal organization of the expansion of the city territory and in this regard:

- The organization of new housing zones is realized on suitable and pleasant terrain hills and beside rivers that do not require significant expenses for preparation and arrangement, while in older, densely populated parts of the city there is a reduction of population density through change of purpose, reconstruction and rehabilitation of residential zones. By increasing the useful area of the

housing unit per inhabitant, which in turn meant reducing the land use index, as well as reducing housing densities, much more favorable conditions for housing within the greenery were created. (Đorđević, 1972)'

5

Discussion: Decoding *Metro-milieu*

5.1

(R)urbanization, Rural Codes and Reflection of Ideological Values

Alter-rurality as a value of contemporary renewal in relation to the conducted study becomes a relevant conceptual construct for discussing the future transformations of socialist housing settlements as a modernist heritage. The periods of urban development of Belgrade territory presented in chapter suggest that there are several levels of urban-rural synergy: (1) the settlement of the rural population bearing the stamp of culture and social identity (2) the process of (r)urbanization, that is, the conception of urbanity of housing settlements so that the landscape elements and the comprehensive landscape structure contain the outlines of rurality, and (3) the activation of urban space based on the habits of the rural population, creating a new connection with the natural, that is, new rural values.

124

The chronological presentation of selected socialist housing settlements illustrates certain principles applied in the design and development that were conditioned by the given urbanistic parameters in the analyzed plans. At the same time, the change in parameters, represented a kind of research process regarding improvement of the quality of housing guided by the results of the research carried out by expert associations and institutions in subject period (Figure 1). As already mentioned in the paper, the studies realized for the plans purpose, represented the impulses for improvement of the methodology of planning, programming and designing of housing settlements.

But the question is, are rural codes recognized in these principles? Is rurality a reflection of ideological values, spatial identities related to nature or demographic structure? How do contrast, gap, or synergies of urban and rural space be observed by mapping structure, function and change? In order to respond to the relation between urban and rural in considering the spatial patterns of collective socialist housing, which by its very nature is aimed at increasing urbanity, it is necessary to re-scale the level of the city and its morphogenesis. Considering the location of the settlements that are the subject of research at the time of their construction and development, their dominant position in the outskirts of the city, within the agricultural and rural areas of the wider metropolitan area, can be observed. This means that these settlements were generators of transformation from rural to urban, but also offered a favorable proving ground for moderate assimilation of the population moving from the rural areas to the developing industrial city. In this sense, a dual question arises: is it actually a creation of a rural area adapted to the needs of the urban man or is urbanity manifested as a generator of a new pattern of living and the creation of new technology of everyday life, creating a relational gap between the different dimensions of housing. The only way to understand urban-

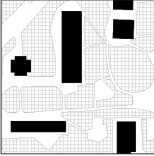
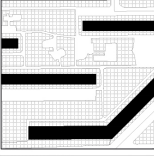
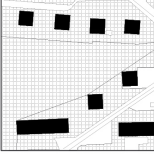
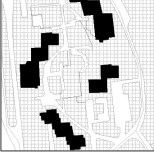
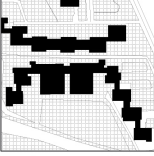
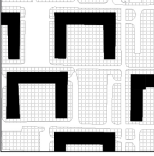
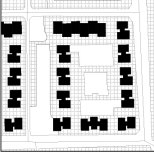

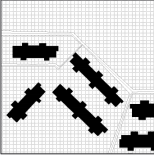
Housing settlements development Timeline	realization year	principles of building composing in line with open spaces	urbanistic parameters and standards for open space in housing settlements
Block 1 and 2 planned and designed in 1958 and 1969 realized in 1960-1963 author: Branko Petričić, architect	1963 	housing buildings are positioned so that each object receives a corresponding free surface of the same size, and are grouped in such a way as to leave an inner central surface for recreation and daily outdoor activities	3630 housing units for 12425 residents 15m ² free space / resident 12m ² park space / resident 2,5m ² sports and children's playgrounds / resident
Konjarnik realized in 1963-1968 authors: Milan Zarić, architect Milica Janković-Jakšić, architect Milenko Jevtić, architect	1968 	housing buildings are designed as markers arranged to form a uniform density of population and equal opportunities for the organization of open spaces	7000 residents 300-350 residents / ha
Šumice realized in 1963-1968 authors: Andrija Mendelson, architect and Gordana Carević, architect	1968 	housing settlement is planned and designed as isolated with a large percentage of green areas for recreation and daily activities, and the central motif is the urban forest	5500 residents 300-500 residents / ha 13,5-15m ² free space / resident
Julino brdo realized in 1967-1970 authors: Milan Lojanica, architect Predrag Čagić, architect Borivoje Jovanović, architect	1970 	housing buildings in the settlement were modeled as unique volumes from two complementary arrays oriented east and west, which were initiated and directed in the horizontal plan	630 housing units for 2100 residents 700 residents / ha
Banjica planned in 1970 competition design in 1971 authors: Slobodan Drinjaković, architect Branislav Karadžić, architect Aleksandar Stjepanović, architect	1971 	the spatial composition of the housing settlement is planned by grouping buildings in several zones that are linked by a unique concept of adapting to the terrain morphology and creating local free spaces and ambiance	4000 housing units 15500 residents 225-440 residents / ha 22m ² free space / resident
Block 45 and 70 competition design in 1965, planned 1966 realized in 1969-1973 authors: Jovan Mišković, architect and Milutin Glavički, architect	1973 	housing buildings are composed in relation to the natural aspects of opening towards the river and the south side, while in the central part there is a linear promenade that connects the open spaces	9000 housing units for 32000 residents 280 residents / ha 22m ² green surface / resident
Dunavgrad - Koteži planned and designed in 1960 final design 1968 realized in 1975 author: Dobrovoje Barlovac, architect Dimitrije Pavlović, architect	1975 	the housing settlement is predominantly designed for residents employed in the agricultural combine and the rural population, which is why all housing buildings are oriented towards the agricultural landscape and its resources	1900 housing units for 5500 residents
Višnjica planned in 1978 authors: Jovan Lukić, architect Slavko Zupanski, architect	1978 	the housing settlement is designed as a medium level urbanity with dominant relationship between housing buildings and existing preserved vegetation that create the identity of the riverside landscape	700 housing units for 2800 residents 105 residents / ha 32,9% free spaces
Cerak Vinogradi competition in 1977 realized in 1979-1988 authors: Darko Marušić, architect Milenija Marušić, architect Nedeljko Borovnica, architect	1988 	the housing settlement is predominantly designed in accordance with the concept of neighborhood and grouping of vegetation in order to create harmony with nature in the everyday life of the inhabitants	3650 housing units for 15000 residents

Figure 1.
Timeline of housing settlements development – urbanistic parameters and principles of composing housing buildings in settlements in line with open spaces. Source: Authors

rural relationships, synergies, gaps and conflicts is through scaling, as a process for fragmenting, grading, and systematically interpreting space and its values.

Having in mind that traditional rural landscapes have a high level of ecological diversity, functionality and high aesthetic value, the insertion of housing patterns in such a framework fosters the tension between the autonomy and networking properties. The basic characteristic of the presented settlements tends to be autonomous, independent entities, which can also be interpreted as nuclei of further development. The generally recognized design principle is thus reflected in the pursuit of open spaces and urban greenery, as spaces of naturalness that allow users to read earlier images of rurality and spatial identities. At the same time, these spaces of the natural environment become impulses for networking, and the key linking mechanism is the ecology of landscape.

5.2

Urban and Rural Dualism: Between Autonomy and Network

Illustrated chronological review points to changes in urbanistic parameters and standards that define the share of urban greenery in the design of housing patterns. Based on changes in the planning and design principles introduced during the preparation and realization of the Master Plan from 1972, it is recognized that the designed relationship between built and natural environment in housing settlements is improved. This suggests that the studies developed for the needs of the new Master Plan were the basis for the subject research methodology, in which the complexity and diversity of aspects in relation to three defined types of housing settlements, according to the criterion of relation to the landscape characteristics, is considered through the defined relevant spatial levels. Based on morphological studies, the typological classification of analyzed residential settlements was carried out through linking historical and urban changes.

126

■ Morphological researches combine several methods, first of all comparative analyses of the theoretical sources, notions and practical examples of the urban forms, which are immanent to the morphological theory, namely to the history and theory of the urban planning and design. ■
(Djokic, 2009)

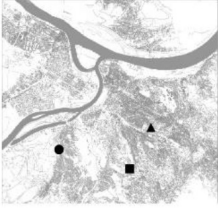
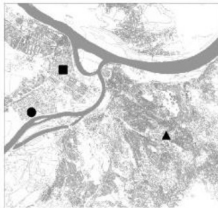
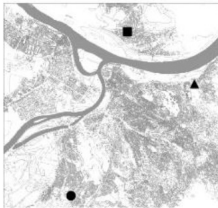
The previous step of the discussion highlighted the morphological aspect of urbanity, that is, the relation of urban greenery, and the way it is perceived in the overall picture of the city to a key topic. Therefore, it is important to once again emphasize the moment and position in which the development of socialist housing settlements in Belgrade is taking place. This position is dual: it is on the margins but develops impulses for networking with the already developed urban structure of the city; a rural man, immigrant to a large industrial city, reads the outlines of agricultural land and creates a picture of local identity; spatial parameters are convergent - directed to the balance between built and natural environment.

The processual relation between urban and rural is as heterogeneous and fragmented as the relation between modernity and rurality, which is why it is very often that modernity is recognized as the exclusionary urban construct. Although

modernity is originally geared towards future opportunities and unpredictable processes, here it is possible to recognize the inverse process of turning modernity into rurality. First of all, it is about the need of the users, that is, the community, to activate the symbolism of the place and the memory of the production of the urban landscape in line with the cultural transformation. In this sense, the production of new modernity is based on the expansion of daily life in the form of activities such as urban gardening, urban greening and agricultural production. These activities become impulses to create narratives of modernities, temporalities and ruralities.

In Table 1, the typological classifications of case studies of nine residential settlements in line with morphological and functional perspective of modernity (structure, function and change) were completed, based on the Master Plans of 1950 and 1972.

Table 1. Housing settlements typology in line with landscape characteristics. Source: Authors

Type	Type 1 TURNING MODERNITY INTO RURALITY	Type 2 TURNING MODERNITY INTO TEMPORALITY	Type 3 TURNING RURALITY INTO MODERNITY
Selected case studies	<ul style="list-style-type: none"> ■ Banjica, ● Julino brdo, ▲ Šumice 	<ul style="list-style-type: none"> ■ Blocks 1 i 2, ● Blocks 45 i 70, ▲ Konjarnik 	<ul style="list-style-type: none"> ■ Dunavgrad / Koteži, ● Cerak vinogradi, ▲ Višnjička Banja 
Structure	Harmonization of housing patterns with natural qualities of the site in morphological sense	Dominance of physically constructed forms in relation to the characteristic of the landscape	Complementing of housing patterns and landscape resources
Function	Housing and urban gardening	Housing and urban greening	Housing and agriculture
Change	Changes take place at the level of cultural and economic values, preserving the autonomy of the spatial and morphological structure with spontaneous and informal common practices such as urban gardening	The changes take place in the direction of networking in the form of a deterministic matrix, which is in accordance with the morphology of residential complexes of this type with the effective development of urban greening	The marginal position of this type of housing settlement makes them the nucleus of urban development; this type is at a turning point from rurality towards new modernities

Type 1 – Based on establishing relationships with the morphological characteristics of the immediate environment that involve the formation of a relationship to the landscape by utilizing the existing topography of the terrain, determining the size of the block, positioning the buildings on the plot, investigating the influence of the sun and the wind on the organization of housing units.



Figure 2.

Type 1: Banjica Housing Settlement – Urban gardening. Source: Authors

Type 2 –Based on dominant shaping of physical structures over the reexamination of the relationship with the landscape characteristics. Formation of an artificial nature in unbuilt areas, and representation of a relation to a landscape through the creation of a network of open spaces with different activities in which urban greenery is accurately developed as an element of design.



Figure 3.

Type 2: Konjarnik Housing Settlement – Urban greening. Source: Author

Type 3 –Based on expressed attitude towards the values of landscapes characteristics of the immediate environment that includes agricultural land, forest land and the proximity of the river. The dominance of the nature elements in shaping the physical structure from the level of the block to the level of the housing unit.



Figure 4.

Type 3: Visnjica Housing Settlement – Agricultural production. Source: Authors

The Figure 5 illustrates the comparative analysis of classified types of housing settlements in relation to the relevant spatial levels – scales: (1) XS: personal characteristics, (2) S: housing unit, (3) M: housing unit, (4) L: housing settlement, and (5) XL: the territory of the city of Belgrade. The relationship between types and scales further illustrate the specific way of manifestation of the principles mentioned in Figures 1 and 2. Each illustration in more detail shows the relation to the landscape by the characteristics and significance of the elements of nature from the level of the territory of the city of Belgrade to the level of the housing unit and the individual experience of the users of the living space.

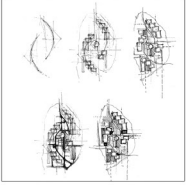

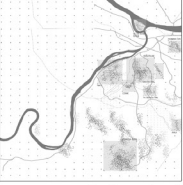
Scales - Spatial levels of housing settlements	TYPE 1 harmonization of housing patterns with the natural qualities of the site in morphological sense	TYPE 2 dominance of physically constructed forms in relation to the characteristics of the landscape	TYPE 3 complementing of housing patterns and landscape resources
XS personal features	 <p>▲ diagramming the ambient sequences of activity</p>	 <p>● nature in everyday life through a technical drawing of details</p>	 <p>● collating the variation of activities according to nature</p>
S housing unit	 <p>■ axonometric representation of housing pattern and vegetation</p>	 <p>▲ the variability in the use of space in line to the effects of the user</p>	 <p>● relationship of the functional structure of the housing unit and nature through horizontal plan</p>
M housing building	 <p>■ diagramming the types of housing patterns according to their relation with the environment</p>	 <p>▲ typological classification of housing patterns in relation to urbanistic parameters</p>	 <p>▲ free-hand drawing of the characteristic sequence of the housing structure type</p>
L housing settlements	 <p>● diagramming morphogenesis of housing settlement</p>	 <p>■ zoning plan of the relationship of built and natural environment</p>	 <p>■ orthographic representation of the morphology of housing settlement</p>
XL the territory of the Belgrade city	 <p>■ mapping built and un-built within the city's territory</p>	 <p>▲ mapping the infrastructure system</p>	 <p>● mapping the system of ecological resources</p>

Figure 5. Scales – Illustrations of design and construction principles on different spatial levels of housing settlements. Source: Authors

6

Conclusion

The reexamination of the set of the theses (1) that the landscape is ideological representation, (2) that the scaling and mapping are a complementary methods for analysis of the complexity of landscape patterns, and (3) that the transformation of urban and rural landscapes in the period of socialism is the most dominant in the development of housing patterns, leads us to new insights into understanding the landscape characteristics and indivisible relationship between ideology and planning, and between the ideology and the design of housing settlements.

The analyzed Master plans of Belgrade from 1950 and 1972, studies designed for their development, expert associations and institutions established for the purpose of investigating complex housing issues. Additionally, the diversity of approaches in the design and planning of housing settlements, are an indicator of the importance of an individual in the socialist society and solving the need for housing and living space on the one hand. On the other hand, this diversity indicated the advancement of the methodological and practical planning thought the relationship of the profession to the current issues of socio-economic development in socialism to cope with global tendencies in the planning and design of cities and the expansion of the city territory dominantly for the purpose of housing. The classification of the typology of housing settlements according to their landscape characteristics represents a contribution to the understanding of the housing patterns development in line with the elements of nature. This is additionally confirmed through the chronological development of the housing settlements, as well as through development of urban parameters that are the impulse of the development of the city territory, and also relations between urban and rural landscapes.

The presented spatial levels / scales illustrate the principles on which housing settlements are designed, or their manifestation in space in different dimensions. Multi-scale approach to the analysis of landscape, landscape structure and landscape ecology in the development of housing patterns through drawing represents a contribution to future research in the field of urban planning and architectural design because it opens up new micro relations and topics in relation to man and his living space that need to be reevaluated in existing practice

Acknowledgments

This research was funded by the Ministry of Education, Science and Technological Development of the Republic of Serbia, grant number 451-03-68/2020-14/200090.

Literature

Amoroso, N. (2014). Hybrid representation: breaking free of the 'sameness' in visual communication in landscape architecture. U N. Amoroso, *Representing Landscapes: Hybrid* (str. 1-25). Routledge Taylor & Francis Group.

Aničin, V. (1969). Osnovna dokumentacija postojećeg stanja. *Urbanizam Beograda*, 4, 7-11.

Bellentani, F. (2016). Landscape as text . U T. B. C.J. Rodríguez Higuera, *Concepts for Semiotics* (str. 76-87). Tartu: University of Tartu Press.

Botton, A. (2007). *The architecture of happiness. The secret art of furnishing your life.* London: Penguin.

Ćorović, D. (2009). *The Garden City Concept: From Theory to Implementation Case Study: Professors' Colony in Belgrade.* Serbian Architectural Journal, 65-80.

Council of Europe. (2000). *European Landscape Convention.* Florence (Italy): Council of Europe.

Czepczynski, M. (2008). *Cultural landscapes of post-socialist cities: representation of powers and needs.* Hampshire, England: Ashgate Publishing Limited. Djokić, V. (2009). *Morphology and Typology as a Unique Discourse of Research.* Serbian Architectural Journal, 107-130.

Djokić, V., Ristić Trajković, J., & Krstić, V. (2016). *An Environmental Critique: Impact of Socialist Ideology on the Ecological and Cultural Sensitivity of Belgrade's Large-Scale Residential Settlements.* Sustainability, 914.

Djokić, V., Ristić Trajković, J., Furundžić, D., Krstić, V., & Stojiljković, D. (2018). *Urban garden as lived space: Informal gardening practices and dwelling culture in socialist and post-socialist Belgrade.* Urban Forestry & Urban Greening, 247-259.

Djordjević, A. (1969). *Novi Generalni urbanistički plan: Beograd do 2000. godine.* Urbanizam Beograda, 4, 2-5.

Đorđević, A. (1972). *Generalni urbanistički plan Beograda iz 1972.* Beograd: Urbanistički zavod Beograda.

Dragutinović, A., Milovanović, A., Nikezić, A., & Ristić Trajković, J. (2019). *Towards a Methodology for Rethinking Modernity: Between Imagined, Realized, and Lived Space.* EAAE Annual Conference and General Assembly 2019: The Hidden School (str. In press). Zagreb: EAAE.

Duncan, J. (1990). *The City as Text: The Politics of Landscape Interpretation in the Kandyan Kingdom.* Cambridge: Cambridge University Press.

Đurović, Đ. (1969). *Sociološki pristup planiranju budućeg razvoja Beograda.* Urbanizam Beograda, 4, 19.

Forman, R., & Michel, G. (1986). *Landscape ecology.* New York: John Wiley & Sons.

Forman, R. (1995). *Land mosaics: the ecology of landscapes and regions.* Cambridge University Press.

Freedon, M. (2003). *Ideology.* Oxford: Oxford University Press.

Gavrilović, B. (1977). *Spoljašnji uticaji na formiranje strukture i organizacije stambenih zgrada.* Informativni bilten CS, 19, 15-23.

Turner, M. (1989). *Landscape ecology: the effect of pattern on process.* Annual Review of Ecology, Evolution, and Systematics, 20, 171-197.

Gunder, M. (2010). *Planning as the ideology of (neoliberal) space.* Planning Theory, 9(4), 298-314.

Hoskins, W. (1954). *The Making of the English Landscape.* London: Penguin. Karamata, K. (1969). *Osnovni elementi za planiranje stanovanja.* Urbanizam Beograda, 4, 26.

Lindström, K., Kalevi, K., & Hannes, P. (2014). *Landscape semiotics: Contribution to culture theory.* U V. Lang, & K. Kull, *Estonian Approaches to Culture Theory* (str. 110-132). Tartu: University of Tartu Press.

Lowenthal, D. (1986). *The past is a foreign country.* Cambridge: Cambridge University Press. Lynch, K. (1960). *The image of the city.* Cambridge, MA: MIT Press.

- Maksimović, B. (1955). Prilozi za proučavanje arhitekture starog Beograda. Godisnjak Muzeja grada Beograda, II, 236-238.
- Mendelson, A. (1974). Urbanističko planiranje i racionalna stambena izgradnja. Urbanizam Beograda, 27, 2-7.
- Milinković, S. (1951). Zelene površine u generalnom planu Beograda. U Generalni urbanistički plan Beograd (str. 137-149). Beograd: Izvršni odbor N.O. Beograd.
- Milinković, S. (1969). Osnovne koncepcije planiranja slobodnih površina. Urbanizam Beograda, 4, 27-29.
- Miljković, D. (1964). Dosadašnji razvoj, problemi i osnovne koncepcije budućeg razvoja Beograda. Godišnjak Muzeja grada Beograda, 27-76.
- Milovanović, A. (2018). Treći Beograd: Pregled razvoja urbanističke misli i delovanja u periodu od 1921. godine do danas. Arhitektura i urbanizam, 16-25.
- Nikezić, A., & Marković, D. (2016). Place-Based Education in the Architectural Design Studio: Agrarian Landscape as a Resource for Sustainable Urban Lifestyle. Sustainability, 9711-9733.
- Normand, B. (2014). Designing Tito's Capital: Urban planning, Modernism, and Socialism in Belgrade. Pittsburgh: The University of Pittsburgh press.
- Perišić, D. (1969). Tretiranje prirodne sredine u fazi generalnog urbanističkog planiranja. Urbanizam Beograda, 4, 63-65.
- Radosavljević, J. (2018). Self-managing socialism and urban planning: The case study of general plan of Belgrade 1972. Serbian architectural journal, 10(1), 81-95.
- Stojanović, B. (1954). Arhitektura Beograda od 1944 do 1954. Godisnjak Muzeja grada Beograda, 1, 189-200.
- Stojanović, B. (1970). Posleratna Beogradska arhitektonska izgradnja. Godišnjak Muzeja grada Beograda, 201-236.
- Timotijević, M. (2012). Modernizacija balkanskog grada (1944-1989): Komparativna analiza razvoja Čačka i Blagoevgrada u epohi socijalizma. Čačak: Narodni muzej.
- Tomić, V. (1969). Neka razmatranja o tendencijama razvoja stambenog fonda u Beogradu. Urbanizam Beograda, 4, 75-77.
- Troll, C. (1939). Luftbildforschung und Landeskundige Forschung, Erdkundliches Wissen. Wiesbaden: Schriftenreihe für Forschung und Praxis, Heft 12, F.Steiner Verlag.
- Troll, C. (1950). Die geographische Landschaft und ihre Erforschung. Studium Generale, 3((4/5)), 163-181.
- Troll, C. (1971). Landscape ecology (geoecology) and biogeocenology—a terminology study. Geoforum, 2(4), 43-46.
- Urbanić, V. (1951). Urbanistički plan Novog Beograda. U Generalni urbanistički plan Beograd (str. 118-134). Beograd: Izvršni odbor N.O. Beograd.
- Wenche, D., Olson, J., & Forman, R. (1996). Landscape ecology principles in landscape ecology and land use planning. Island Press: USA.
- White, R. (2004). From Wilderness to Hybrid Landscapes: The Cultural Turn in Environmental History. The Historian, 66(3), 557-564.
- Wiens, J., & Bruce T, M. (1989). Scaling of "landscape" in landscape ecology, or, landscape ecology from a beetle's perspective. Landscape Planning, 3(2), 87-96.
- Wu, J. (2012). Landscape Ecology. U R. Leemans, Ecological Systems: Selected Entries from the Encyclopedia of Sustainability Science and Technology (str. 179-200). Springer.

Wylie, J. (2007). *Landscape*. London: Routledge.

Zonneveld, I. (1989). The land unit – a fundamental concept in landscape ecology, and its applications. *Landscape Ecology*, 3(2), 67-86.

Interdisciplinary research event

Metro-milieu: (alter)Ruralty as a relational gap between inhabiting scales

Organization

University of Belgrade – Faculty of Architecture and ARENA Architectural Research Network, AlterRuralty project

Scientific Committee

Vladan Đokić, Pieter Versteegh, Chris Younès, Zoran Lazović, Ana Nikezić, Sophia Meeres, Dominic Stevens, Ben Stringer, Nataša Teofilović, Vasilije Gvozdenović, Michael Woods, Đorđe Stojanović, Anđelka Bnin-Bninski.

Organizing Committee

Anđelka Bnin-Bninski, Ana Raković, Ksenija Pantović

Venue

Faculty of Architecture, University of Belgrade

CIP - Каталогизација у публикацији
Народна библиотека Србије, Београд

711.4:502.131.1(497.11)(082)

METROMILIEU : rural economy as a relational gap between inhabiting scales / editors Ana Nikezić, Anđelka Bnin-Bninski, Pieter Versteegh. - Belgrade : University, Faculty of Architecture : ARENA Architectural Research Network, 2021 (Belgrade : Donat Graf). - 150 str. : ilustr. ; 21 cm

Tiraž 100. - Str. 6-7: Intro / Anđelka Bnin-Bninski, Ana Nikezić, Pieter Versteegh. - Napomene i bibliografske reference uz tekst. - Bibliografija uz svaki rad.

ISBN 978-86-7924-222-8 (FOA)

1. Nikezić, Ana, 1973- [уредник] [аутор додатног текста] 2. Bnin-Bninski, Anđelka, 1984- [уредник] [аутор додатног текста] 3. Versteegh, Pieter, 1955- [аутор додатног текста] [уредник]
а) Просторно планирање -- Зборници б) Урбани развој -- Одрживи развој -- Зборници

COBISS.SR-ID 55105801