

## RE - VIEWING CITYSCAPES

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**Abstract.** *The aim of this paper is to provide an introduction of an analytical method for aiding urban design, in light of both theoretical and empirical background. The method proposed is based on the attempt to bring the aspects and dimensions of physical form in a tighter relationship with those of urban activities, movements, processes and functions. With an aim to be promoted as a significant design tool, the analytical experiment based on a form of mapping was examined in the context of Ribarsko ostrvo, a peninsula on the Danube river in Novi Sad.*

**Key words:** *mapping, method, urban design, morphological characteristics, urban process, activity.*

### 1. INTRODUCTION

By defining urban design as "...a process of giving physical design direction to urban growth, conservation and change"[1] Barnett addressed many different dimensions and scope of the overall problem that the 21<sup>st</sup>-century city is faced with. Among various themes connected to the contemporary urban practice, those of reconstruction, revitalization and renewal are of particular interest. In response to the question of great importance of urban design, being essential to the processes of regeneration, improvement and adaptation in a city context, the Department of Architecture and Urbanism, Faculty of Technical Sciences of the University of Novi Sad has launched a student's project entitled *The urban transformation of Ribarsko ostrvo in Novi Sad*. Studio based practical work on this project was a part of the 5<sup>th</sup> year course *Urban Design III*. The project aspired to re-qualify present local identity of the site that could be described as an urban "virgin land" with small if any urban development and infrastructure. The importance of creating the diversity of the built environment was emphasized particularly by setting a number of specified goals – to heighten the special effect of already existing juxtaposition of land and water, to introduce a mix of uses and densities as well as to create legible public open spaces.

The main aim of this paper, however, is not to illustrate completed students' projects, but to present and promote an analytical method for aiding urban design, which significantly helped the students to improve their design solutions. The introduced analytical experiment is based on a form of mapping, which approaches the built environment not as a static object, but rather as constantly changing dynamic system<sup>1</sup>. It stresses the essential relationship between morphological characteristics and those of spatial energy, urban processes, activities and functions, as integral parts of urban space and life.

## 2. ON DESIGN METHOD

For most of this century, as Batty et al. have stated, urban design in terms of both its practice and theory has been dominated by qualitative substantive issues, by an emphasis on solutions, with a strong focus on visual factors, but definitely not by strong discussion of how good designs might be generated [2]. Historically, the design process was physical and designers would draw on the paper and construct scale models. Designers have also utilized tools such as cognitive mapping, by drawing the map or using paper cut-outs, to facilitate the design process. These tools would be of special interest in developing research methodology concerning urban design, that will be presented in this paper.

Psychologists call the acquisition of spatial knowledge "cognitive mapping process". Golledge described this process as leading to the formation of an internal representation of space, which is indispensable to allow interaction with the external world [3]. The term "cognitive map" was introduced to refer to this internal representation [4]. According to Cosgrove, today "mapping involves sets of choices, omissions, uncertainties and intentions – authorship – at once critical to, yet obscured within, its final product, the map itself" [5]. The meaning of a map therefore arises from the map-making and the interpretation process, both of which are highly subjective.

Lefebvre [6] also distinguished between 'representation of space' engaged in by planners and cartographers and symbolic 'representational space' in cities, drawing on shared experiences and interpretations of everyday 'spatial practices' of people, where making space is very much a way of making meaning. According to Foucault [7], the meanings of representational spaces or discourses are never absolute, but always subject to translation and interpretation. Therefore a postmodern urbanism is conscious of the power of discursive production of urban representational spaces where "people not only live their spaces through its associated images and symbols" [8], but actively construct its meaning through cognitive and hermeneutical processes. According to this, decision making in spatial cognition can be consisted of encoding processes, internal representations and decoding processes.

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<sup>1</sup> In this paper mapping is not being referred to in a traditional understanding that denies motion as one of the most important issues of the city-life at the present moment. " Traditionally, maps have been regarded as abstractions of reality, which provide objective information about the world surrounding us. Today, however, maps are increasingly thought of as products of culture, reflecting the world views of the map makers." [16]

This can be analyzed on the example of architecture design process of Peter Eisenman [9] and Bernard Tschumi [10], who both dismantle the conventions of architecture by using concepts derived from cinema, literary criticism, philosophy and psychoanalysis [11]. According to Tschumi, 'Urban Disjunctions' rejects the notion of synthesis in favour of juxtaposition of contradictory forces [12], thus producing dissociation which Derrida [13] would call difference in space and time, with architectural elements only functioning by colliding with programmatic elements (Cross-programming, Trans-programming, Dis-programming). Urban Disjunction emancipates architectural thinking from the hegemony of functionality, from its traditional elements such as harmony, unity, symmetry...and re-inscribes these motifs within new spaces, new forms, to shape new spatial experiences and representations [14].

### 3. STAGES OF DESIGNING PROCESS

As Sparacino et al. stated, referring to virtual space, "in order for any kind of information to be presented to us in a way which is not fragmented or disruptive of our current activities, for it to become a part of our cognitive space, and be remembered and integrated with the flow of our mental activities, we need to be able to map, directly or by analogy, some of the real-world architecture back into the computer display" [15]. This paper shows that our knowledge of real-world space can be used not only to find our bearings in cyber-space, but also to design the transformation of "*virgin-land*", using space as memory device or technique.

In the year 2006, the Department of Architecture and Urbanism, at Faculty of Technical Sciences of the University of Novi Sad has launched a student's project entitled *The urban transformation of Ribarsko ostrvo in Novi Sad* (Fig. 1), which aimed towards experimenting with the design method proposed in this paper. The method was introduced in the second phase of the project, following the critical analysis and evaluation of initial site conditions with the emphasis on complete understanding of the genius loci and natural and topographical reality of the area. Students were then encouraged to define their project concept through making a new site map by utilizing the existing urban matrix with distinctive qualities and applying them to the site. Three recognizable parts of Novi Sad were chosen having different spatial and functional characteristics. The task comprised three consecutive stages, all being based on the methods of analysis and synthesis.

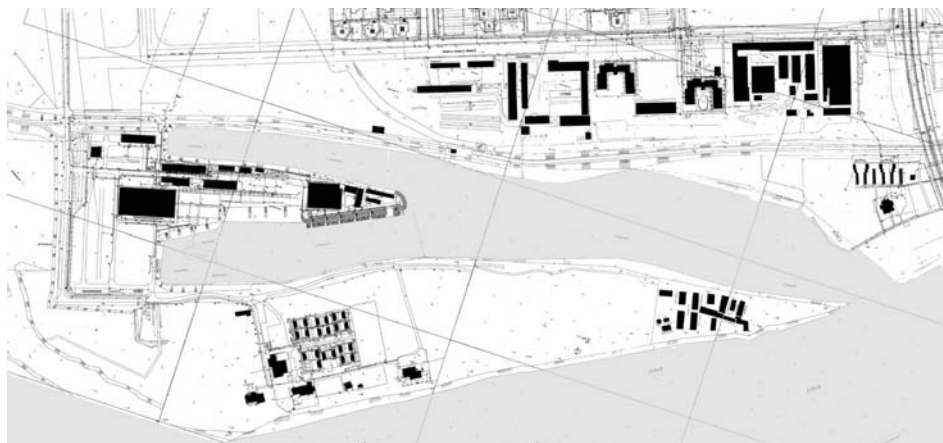


Fig. 1. The site - Ribarsko ostrvo in Novi Sad

**The first stage** included analyzing the sites through points of programme, infrastructure, architectural typology, urban morphology, urban development, identity and activities, structure and meaning. All chosen areas have an easily-remembered spatial organization reflecting building concepts, ideas and principles of the time they were planned and realized in. The first site is the oldest, having a square (*Mladenci Square*) at an exposed position. The high-density area consisting of residential and office buildings (few listed for preservation) has a firm street façade-line as its main morphological characteristic. The second chosen area (around *Radnička Street*) is mainly residential with lower density, wider streets and quadrangular urban blocks. The third site (*Liman III and Liman IV*) represents a typical residential area planned and built in 1970s based on the «high rise-high density» formula. Solitary buildings, only few housing types, open block structures with spacious inner courtyards and wide streets are the dominant features of this area (Fig. 2).



Fig. 2. Urban fragments subjected to superimposition (from left to right): area around Mladenci Square, urban blocks around Radnička Street, Liman III and IV

After analyzing the chosen areas, identifying characteristics of their physical form and recognizing the type and intensity of urban processes involved, in **the second stage** students were encouraged to apply selected elements to the working area of *Ribarsko ostrvo*,

superimpose them in order to produce a logical and functional context and create a new virtual site map. Of the particular importance were the elements facing the water, which were interpreted as essential for gaining the structural quality. This led to **the final third stage** emphasized here as a crucial part of the process as a whole. It involved analyzing mutated area, recognizing spatial and functional differences, and their impacts on the development processes on the site and its surroundings (Fig.3, Fig. 4, Fig. 5).

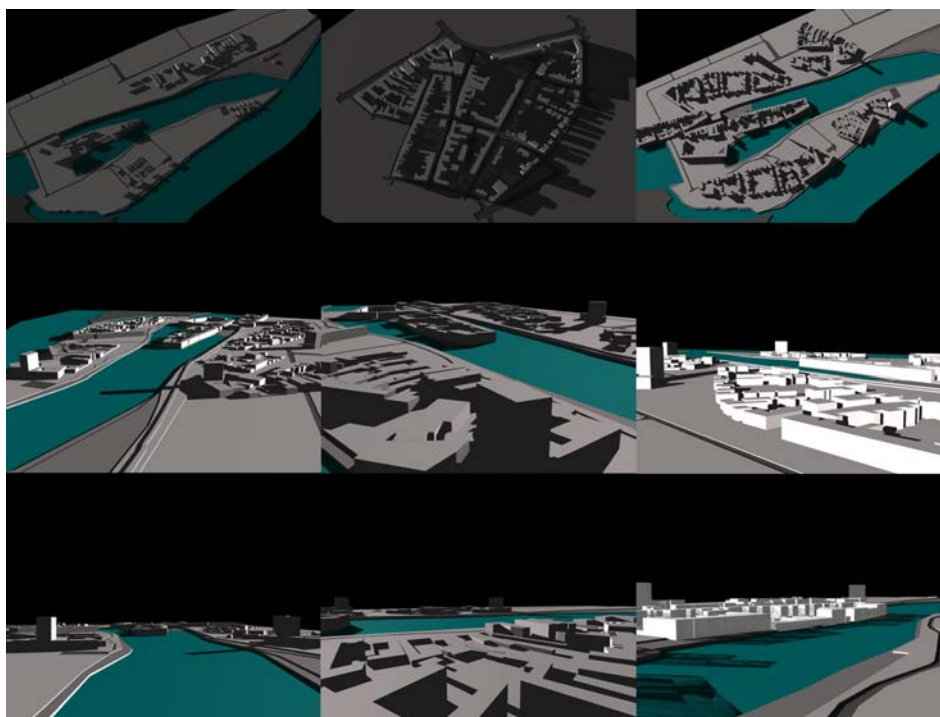


Fig. 3. New urban scape: superimposition of Ribarsko ostrvo with area around Mladenci square.

The new urban «scape»<sup>2</sup> was acknowledged by the students not only as a physical form, but as a framework for various activities of the urban environment. This was the guiding idea, which led to removing the selected elements of the urban fabric, defining the concept and deciding on the key factors of the project – architectural typology and building types, programmes and the elements of urban morphology.

<sup>2</sup> The term «scape» is used here as the metaphor of mobility, movement and mixture, as is pointed out in contemporary social theory [19]. "The cityscape builds up its meaning upon the term landscape... At a first glance it suggests a framed singled-out view of the city. In that sense its structure is more of a picture itself and less of an event... By virtue of being a picture, the cityscape would primarily be static in its nature. However through the developments of film and television in the past century, the landscape / cityscape incorporated time and movement." [20].

The quality of completed projects showed that students benefited from the use of the proposed method as a designing tool. The fact that urban forms are the sources of the urban images was the main presupposition of this analytical experiment. It was based on the attempt to combine physical and cognitive elements of the urban space in order to underline the relationships between linear designing and decision-making process and urban situations, connections and experiences<sup>3</sup>. The method proposed could therefore be used as a part of systematic approach to urban design comprehended as the "complex art of relations and relationships" [16].

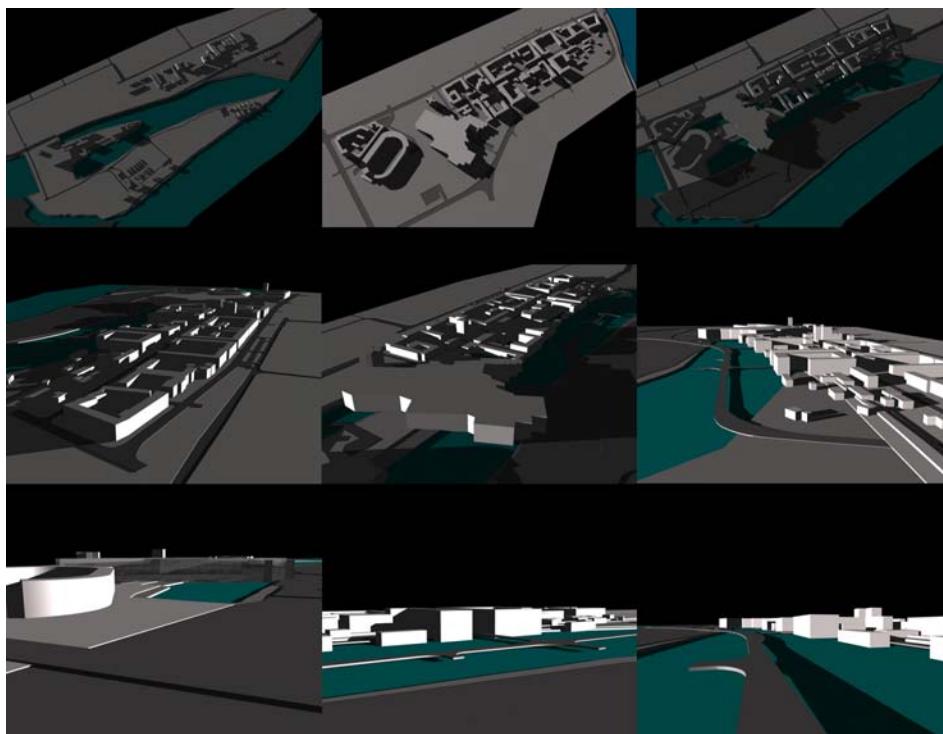


Fig. 4. New urban scape: superimposition of Ribarsko ostrvo and blocks around Radnička street

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<sup>3</sup> According to Coates "..., first and foremost, the city should be a place of experience – it puts experience before the formal stylistic or functional qualities of buildings" [21].

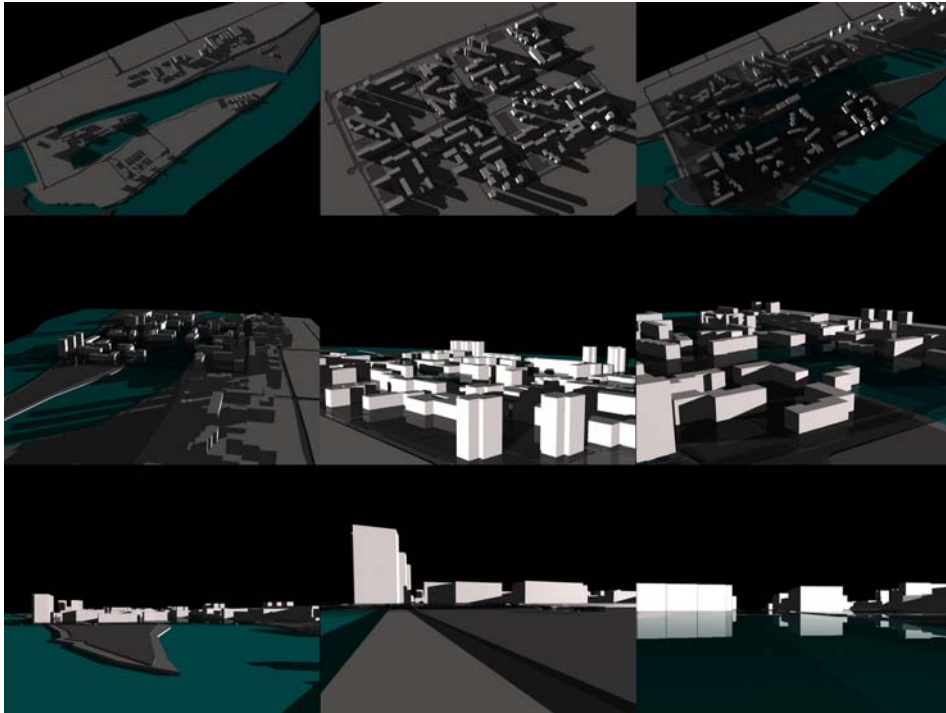


Fig. 5. New urban scape: superimposition of Ribarsko ostrvo and Liman III and IV

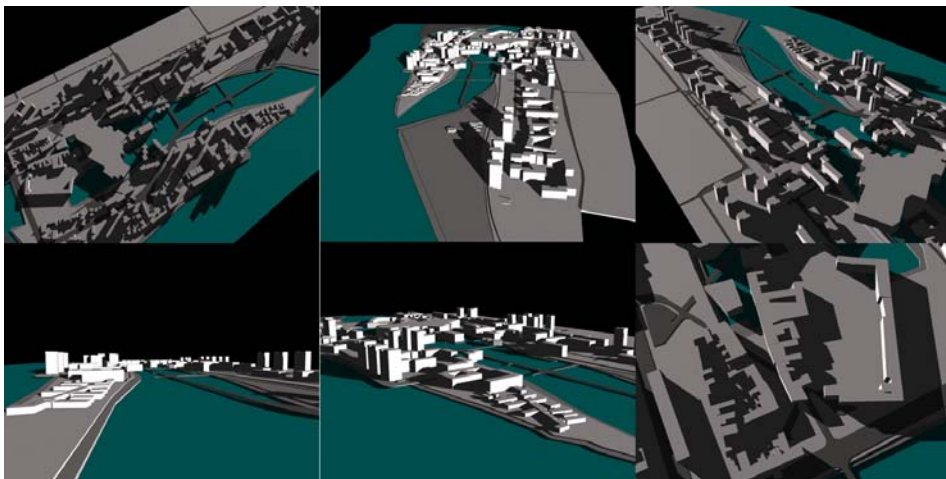


Fig. 6. New urban scape with elements of all proposed urban fragments

## 4. CONCLUSION

The scientific justification for mapping is found in postmodernism and in the recent development of geography [17]. Postmodern science has challenged the modern way of understanding and explaining the world. It encourages interdisciplinarity and transdisciplinarity, as well as diversity of methodologies and innovative ways of presenting results [18]. The method presented here aimed to explore one of three ways<sup>4</sup> in which cognitive maps are created through the design process performed on the urban "*virgin-land*". The condition of the land being unbuilt highly recommended this location for application of the method presented. If the project involved densely built environment, especially historic city centers, the superimposition of this kind should take in count numerous issues that haven't been analyzed in this case. This means that every specific project where this methodology could be used represents an unique case with different potentials. Maps produced through the process of 'superimposition' (in which fragments of existing maps were taken and rearranged or juxtaposed to produce a new spatial sense) convey a social, experiential or existential 'truth' (Fig. 6). This 'truth', seen as a basic element of the project design, is always personal and subjected to previous experiences of the author. In that sense, although all of the students used the same urban fragments from the city of Novi Sad map, their results were divergent. This is because urban design involves a very wide range of issues from the socio-economic, to the functional and the behavioural, to the aesthetic as well as to the constructional and the environmental. Each author/student interpreted these issues and constituted specific hierarchy among them, in order to deal with the individual relationship with the space.

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<sup>4</sup> "In exploring how people formed mental images of a city Briggs has identified three complementary ways in which cognitive maps are created: through an individual 's sensory modalities, from symbolic representations such as maps, and **from ideas about the environment which are inferred from experiences in other similar spatial locations**" [22].



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## **NOVI POGLED NA PROJEKTOVANJE GRADSKOG PEJZAŽA**

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*Cilj ovog rada je da predstavi analitički metod u urbanističkom projektovanju, podjednako na teorijskom, kao i na praktičnom planu. Metod koji se predlaže zasniva se na sintezi fizičke forme i aktivnosti, procesa i funkcija u urbanom okruženju. Analitički eksperiment, uz korišćenje predloženog metoda, je izvršen na primeru studije Ribarskog ostrva u Novom Sadu.*