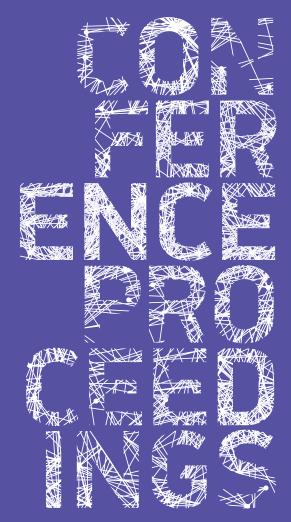


5th INTERNATIONAL ACADEMIC CONFERENCE ON PLACES AND TECHNOLOGIES

EDITORS

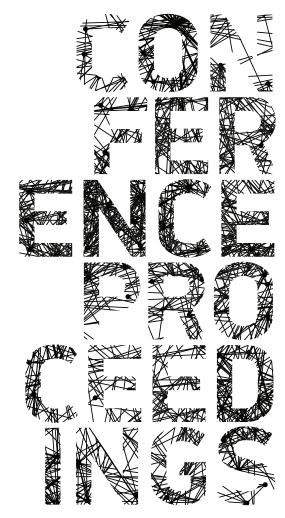
ALEKSANDRA KRSTIĆ-FURUNDŽIĆ MILENA VUKMIROVIĆ EVA VANIŠTA LAZAREVIĆ AND ALEKSANDRA ĐUKIĆ



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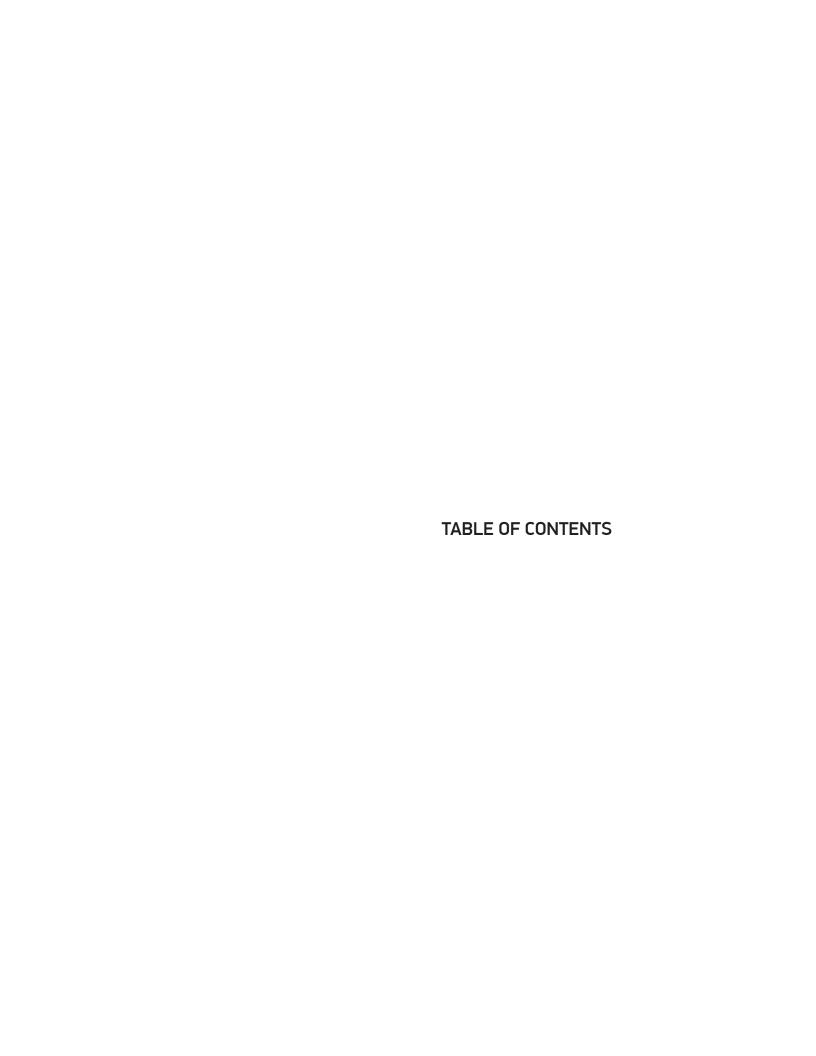


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PLACE NETWORKS. EXPERIENCE THE CITY ON FOOT

Dr Milena Vukmirovic1

Assistant Professor. University of Belgrade - Faculty of Forestry, Department of Landscape architecture, 1 Kneza Viseslava Street, 11000 Belgrade, Serbia, milena.vukmirovic@sfb.bg.ac.rs

Dr Aleksandra Djukić

Associate professor, University of Belgrade - Faculty of Architecture, Bulevar kralja Aleksandra 73/II, 11000 Beograd, Serbia, adjukic@afrodita.rcub.bq.ac.rs

Branislay Antonić

Teaching Assistant and PhD candidate, University of Belgrade - Faculty of Architecture, Bulevar kralja Aleksandra 73/II, 11000 Beograd, Serbia, antonic83@gmail.com

ABSTRACT

Considering the walking as the everyday activity of the most of the citizens and visitors of particular city or town, the experiences that arises in this kind of the interaction with the place are of great importance because they affect the formation of a general impression of a certain place. In order to mark these interdependences the method for evaluation and public spaces design in accordance with the user needs and human size need to be reached in order to create a good and visited public space. The methodology is used and tested during the student workshop in Golubac, within the DANUrB project. This paper will present the results of the research that aimed to discover how to organise the network of pedestrian spaces in order to increase the attractiveness at the destination level, establish appropriate links between them and achieve the desired effect creating a liveable town.

Keywords: pedestrians, public spaces, public space networks, Golubac

Introduction

By placing an emphasis on public spaces and pedestrian environment, a light is put on the significance of small scale, often neglected in contemporary projects and development strategies. Visions which correspond to this perspective put focus on specific advantages of cities proportional to dimensions, senses and walking speed and form a basis for more complex and diverse relations (Vukmirović 2014). More concretely, they correspond to improving the quality of the smallest places in such way that people are simply attracted to go there and spend time there (Vukmirović/Vaništa Lazarević 2014). Urban design and planning on human size has the task to encourage intensity of pedestrian movement as part of integral urban policy with an aim to develop lively, safe, sustainable and healthy cities. This is equally important for strengthening the social function of urban environment as a meeting place, which contributes to social sustainability and creation of open and democratic society.

Considering the ways people experience the city using all their senses (Gehl 2010), the formation of the network of pedestrian as well as public spaces could be analysed on the basis of its simplified structure, which includes identification of paths/connections and destinations/ nodes (Vukmirovic/Folic 2017). This approach was used in Spatial Metro Project that has the objective to improve the centre of the city for pedestrians (van der Spek 2007). Destinations are the places with the greatest intensity of users and correspond to the places that are located at the corners of the streets, main public spaces or dotted along the paths. On the other side,

¹ Corresponding author

connections, function as water canals and correspond to the streets in which the most of the movement takes place.

Taking into consideration above, the research was organised in the form of student workshop designed and tutored by Assist Prof. Dr Milena Vukmirović in order to discover how to organise the network of pedestrian spaces in Golubac (Serbia) in order to increase the attractiveness at the destination level, establish appropriate links between them and achieve the desired effect creating a liveable town. Students were observed the roles and uses of particular public spaces that form the pedestrian network and its share in improving the physical identity of the place. The overall perception of the potentials of particular public spaces as well as the whole network of public spaces in Golubac is presented in the form of design concepts of possible transformation. Design proposals were emphasised the advantages and given the solutions for overcoming the identified problems.

Methods and material

The research included specific goals which direct the definition of the used methodologies: determination the existence of the network of pedestrian spaces and its potential, identification of particular destinations and connections within the network and their characteristics and investigation of the potentials carried by identified places and presentation of the design proposal for them

Following these objectives, several methodologies, specially designed and adapted for this purpose, has been used in this research: field work and study, mapping, comparative analysis, criteria based evaluation of public spaces and research by design of the potentials of the public space network. Fieldwork and study was organised as a walking tour for getting the first impressions of the town and making the primarily data and real-time documentation: photos, video, short, written impressions, main content distribution and landmarks position. Mapping included interpretation and presentation of the following data and results: main destinations and its character, program and attractors, the locations of potentially new destinations within the network, network of pedestrian spaces, defining its destinations and links and determining its character, program and attractors, and the evaluation of the quality of the most important public spaces based on the quality criteria. Research by design of the potentials of the network of pedestrian spaces in Golubac as well as of the potentials of the particular most important public spaces in Golubac that include 8 destinations and 7 connections. The workshop² was designed and planned as the set of activities that were structured chronologically in order to create the final product defined as catalogue of the most important public places in Golubac.

Results

Considering elements of the public space networks, in the actual state **are recognised 10 destinations and 9 connections**. Destinations are divided into three groups: public places, semi public places and public objects. Some of them also has character defined as main gathering place, commercial zone or promenade. On the other side, connections are divided into the public space and pedestrian connection, main motorway and secondary motorway.

² The workshop started on Monday, 16th October 2017 at 9am with the fieldwork and immediate study of public spaces in Golubac. There were 48 students of Bachelor degree in architecture from four universities: University of Belgrade (Serbia), University of Novi Sad (Serbia), University of Budapest (Hungary) and University of Bucharest (Romania), who were for their first or second time in Golubac. The fieldwork was organised in the form of walking tour with the task to visit and record the actual state of public spaces in Golubac.

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Figure 1: Network of public spaces in Golubac. Source: U. Marković, I. Kisin, J. Jofoldi, T. Heksch, C. Samaranda and P. Condrut, 2017

Destinations that are recognised within the network include (see Figure 1): West marina with the direct contact with Danube, motorway and promenade and possibility for fishing, owns the potential that is not fully used; **Main square** with library, hotel and post office, a meeting place in direct contact with the main street and the public park, owns the potential that could be further improved; School with an accompanying environment next to the river, two courts with the direct links to the promenade and main street, in the state that is not attractive; East marina with docking area, owns the potential for introduction of the water traffic and installing equipment that would complement this content, at the present it is not in use; Theatre and cinema building with its surrounding, public institution places on the main street, the building has architectural value, but need serious reconstructions and reorganisations in order to meet contemporary needs and become more attractive; Square in front of the church, another main meeting place, connected with two secondary motorways, peace and quiet, the church is recently renovated, bit the place need the improvement; Public park the area for meditation and the connection with the nature in direct contact with the waterfront promenade and near to the main street, has the potential and need the improvement: Health care centre, medical institution connected with three secondary motorways in condition that is not attractive and **Historical site** has the historical identity and awareness, founded artefacts, very poor accessibility, but with the strong unused potential. In relation to the connections there is river promenade, a peaceful path for relaxation and recreation, temporarily active with public events, has multiple approaching points and it is in good condition: main street with the commercial zone as some king extension of the main city square. a strong and intensively used **motorway** that connect Golubac with other settlements and a few secondary streets which flow into the main street.

General attitude is that all public spaces that are recognised within the network of public spaces own its strong character which is related their location, but need a significant reconstruction and improvement. In regard with that, the proposal of the future network of public spaces in Golubac strives to emphasize the existing character of the recognized spaces, to improve and advance their appearance and contents in order to meet contemporary needs and extend its influence and expansion into new areas.

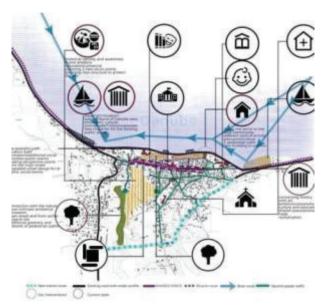


Figure 2: Future network of public spaces in Golubac. Source: U. Marković, I. Kisin, J. Jofoldi, T. Heksch, C. Samaranda and P. Condrut, 2017

The future network of public spaces in Golubac envision 15 destinations and 11 connections (see Figure 2). The main improvement is seen in proposal of the new transit route which would remove of heavy and intense traffic from the main street. West marina will get two new contents - aquarium and museum for the specific fauna of Danube area, it will be recognised as educational and cultural point in improved in that way to highlight its new character; School with an accompanying environment will be transform in an area with a strong sense of community and complementary activities, while the area will be arranged in accordance with new needs and the place in front of the church will be renewed and improved. The network will be complemented with two new destinations in the southern part of the city on the area of the historical site. It will cover the historical site with the special building structure that will protect the artefacts and give the opportunity for locals and visitors to see heritage and to educate. Next to the it will be place for new park of the natural good for relaxation and recreation. These destinations will be connected with other places by two new connections. One will be completely new connecting the historical site with the main street, and another will be the extension of the existing Kraljevića Marka Street.

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Figure 3: Proposal of the public space improvement. Source: U. Marković, I. Kisin, J. Jofoldi, T. Heksch, C. Samaranda and P. Condrut, 2017

Important transformation will be in the area of the commercial zone of the high street which is proposed to be extended and treated as **a shared space** in the future. That will contribute in the integral connection and a kind of unification between the main street, Main square and the green area along the Danube promenade. All the proposed interventions are conceived in the spirit of contemporary design and public space treatment (see Figure 3) which will additionally contribute to the revival and attractiveness of the entire public space network in Golubac.

Transformation of public spaces in Golubac

The potential of selected public spaces is presented as an illustration of a design concept showing its improved future character, the main attraction, activity and urban equipment. For the purpose of this paper two public spaces in Golubac were randomly chosen. One as a representative of destinations - Golubac Market and another as representative of connections - Cara Lazara Street.

Golubac market will keep on its basic content, but will benefit from the position of the location which is places on a hill. In this way the market can become a kind of sightseeing which roof can be used for these purposes. The entire space will be improved by the construction of the new market building and contemporary urban equipment (see Figure 4). In general, for the most of selected destinations similar enhancements are proposed - keeping the main character and buildings, renovation of existing buildings, new paving and contemporary and contemporary and sustainable urban equipment.



Figure 4: Design concept of Golubac market. Source: D. Kecskes, A. Simon, P. Vitas and V. Vujanovic, 2017

Cara Lazara Street is chosen as the representative of connections. The main task of this trans formation is to slow down the traffic in the main city street (see Figure 5). If a bypass-road is built, Cara Dušana Street could be transform following the rules of shared space concept where the priority is given to pedestrian s and cyclists. In the presented proposal the authors suggest widening of the sidewalks, new paving, new urban equipment, new lighting and renovation of the abandoned houses into the attractive facilities.

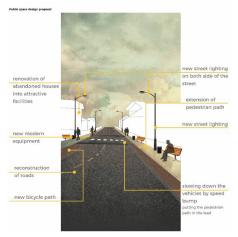


Figure 5: Design concept of Cara Lazara Street. Source: M. Samicskov, A. Voros, S. Bunicelu and S. Tajic, 2017

Such interventions are proposed for the most of the connections correspond to motorways, while for pedestrian connections it is proposed to improve the pavement, to introduce better lighting and art in the public space.

Conclusion

Presented results gave an overview of the actual state of the network of public spaces in Golubac as well as their potential. Seen as the resource, future organisation and development of public space network would focus on increasing the attractiveness at the destination level, establishing appropriate links between them and achieving the desired effect creating a liveable town. This could be possible if the most important elements of the city are preserved, if the basic character of existing locations is maintain, and the network of open spaces is expanded for new with complementary content and if we shape the city on human size stimulating walking and biking and the preservation of natural resources.

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References

Gehl J. (2010) Cities for People, Washington: Island Press

Vukmirovic M. (2014) Pešački prostor i kompetitivni idenittet grada, Beograd: Zadužbina Anfrejević Vukmirovic M., Folic B. (2017) "Cognitive performances of pedestrian spaces" in Facta Universitatis Series: Architecture and Civil Engineering vol. 15, no 1, special issue, pp. 43-57

Vukmirovic M., Vanista Lazarevic E. (2014) "Design on Human Scale _ Smart Pedestrian Environment", Fikfak A. (ed.) Book of Proceedings Scientific Meeting on the Topic of Urbanism, Ljubljana, 19–21 June 2014, Ljubljana: University of Ljubljana, Faculty of Architecture, pp. 203-215