COGNITIVE PERFORMANCES OF PEDESTRIAN SPACES

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Abstract. *If the city and its physical structure are understood as some kind of an extended, external memory of the human mind, two aspects are observable. The first relates to the characteristics of the city and its places to help in the orientation and way finding of its citizens and visitors. They could be explored through mental or cognitive maps. The second aspect includes the elements involved in generating the image and identity of the city. Looking at the pedestrian space as an environment that achieves the most intimate relationship of users and the city, the paper would present the elements that can be seen as cognitive performances of pedestrian spaces. They will be analysed at the area of the City of Belgrade, central pedestrian network with the aim to identify existing and to propose future elements that will contribute to its extension and intensive use.*

Key words: *pedestrian spaces, communication, cognitive performances, City of Belgrade*

1. INTRODUCTION

By observing the communication from the aspect of culture, every cultural phenomenon could be seen from the communicational perspective, i.e. as model or way of communication (Tomić 2003, 12). This is also the case with a pedestrian space. In contrast to the non-verbal communication, pedestrian space has cognitive dimension that is not based solely on interaction. In regards with this, it was noticed that people their physical environment[1] associate with connotations that are more frequent subject of research.

According to IRN[2], cognitive system in general and the one associated with cognitive maps extends beyond the individual mind in the external environment. This could be

[1] Landscape, cities of other geographical phenomena
[2] Inter-Representational Network (IRN)

explained by the fact that the cognitive system is a network made up of internal and external representations. *Internal representations* are related to entities, constructed in the human mind, which represent the information (visual, olfactory, language, etc.) from the external environment. On the other hand, external representations refer to entities created on the basis of human mimetic, linguistic and manufacture capabilities that represent the information generated in the mind. They are products of human abilities to represent the ideas, emotions and thoughts externally and can be divided on body and artificial representations. In contrast to body representations, which cannot extend outside the body, the artificial ones expand outside the human body and become independent artefacts (objects).
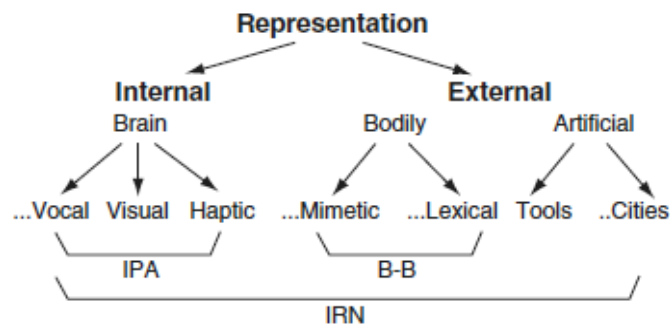
Fig. 1 Human representative abilities (Portugali 2011, 142)

By observing the pedestrian space in presented way, the model of synergetic inter-representative network - SIRN (Portugali 2011, 142) 1) establishes the relations on the basis of official self organising mediator that is a subject of the operation of two streams of information (internal and external) and 2) explains the ways in which performances are entered into the external world (the city) and the ways people understand them (as intermediaries). In accordance with that, the result of the SIRN is two fields of information – internal and external. Each of these fields is accessible and legible to its creator. However, the field of the external information is also accessible and legible to other people. Thus, the interaction of internal and external information is called a *common reservoir* and can take forms like text, Internet, objects or entire cities. Therefore, the city users with their activities and behaviour define the city[3].

This paper covers three parts. The first part is dealing with the general presentation of the communication of urban environment with the focus on its cognitive dimension. In the second part the specificity and physical characteristics of the pedestrian space network, as a communicational instrument will be presented. And in the third, the case study of pedestrian network in Belgrade central area will be used as an illustration of the presented findings.

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[3] In the language of synergetic this process is called **circular causality**, while in social theory, the same term is known as **socio-spatial reproduction** and **structuring** (Portugali 2011, 164).

2. COMMUNICATION OF THE PEDESTRIAN ENVIRONMENT

Walking is the most intimate with the environment and allows a much more articulate processes of interpretation and memory (Madanipour 1996, 64-65). Observing the architecture and urban design as a visual art, Cullen (1971, 194) is focusing on personal and emotional reactions of the urban environment, because they are "captured" by sense of sight. He was presented the series of visual techniques that was used to show the walk through the environment by capturing current and future views of the observer during the motion. These findings are supplemented by the understanding of the position of the body in the environment, its awareness of the space and the mood and the character of the individual. However, the disadvantage of this approach is seen in the fact that the urban environment is exercised as the stimulus of other senses, especially if one takes into account pedestrian movement.

In order to form a humane approach to urban form, theorists have been searching for an image of the city and its legibility. The technique that was used in the study of ways that people remember the environment is mental mapping, i.e. detection of mental images of particular places created by the individuals (Madanipour 1996, 66). Being interested in the visual quality of American cities represented in the mental maps of its citizens, Lynch (1979) has distinguished five elements of the image of a city: paths, edges, nodes, landmarks and districts. It was noted that the cities in which the five elements are clearly observed offer much more than a visual pleasure, but emotional security, because they increase the depth and intensity of human experience.

Golledge (1978) has concluded that people first remember locations with landmarks, then come the links between locations and at the end areas as a surrounding of the locations. This resulted in the determination of three or four elements that affect the level of legibility of the city: points, lines, areas and surfaces. Accordingly, the knowledge of the environment acquired during the physical movement covers recording parts of the network structure (planned or strip-folders) and cognitive processing and storage of knowledge gained from observations made during the movement and path finding. Other studies suggest that people, instead of the subtle factors of design, are also interested in what is happening in a certain area. Thus the importance is given to the specific use of a certain area.

Potugali (2011, 199) noticed that the face of the city is formed by elements – external representations – that have the ability to encompass and transfer the information – Shannon and semantic. Shannon information has the information capacity of the communication channel, regardless of the quality or meaning of information. On the other side, semantic information refers to the meaning that is transmitted through representation of the experience specific receiver. Thus, in addition Lynch's five elements, there are also other buildings, streets, parks, etc. The difference between them is reflected in the quantity of information they contain, and are thus more or less important for the legibility of the city. Accordingly the face of the city is the message that transmits different level of Shannon's information that depends on semantic information. And, that is how people cognitively and actively give the meaning to the elements from which the city is made, as well as the city as whole.

By detailed research of the face of the city, another way of analysing the semantic information is established. This is the observation of urban artefacts as unique and redundant (see table 1). Unique artefacts are elements in the environment that carry high value Shannon's information, and because of that it are easy to remember them. As a result, unique artefacts are much more intensively involved in shaping the face of the city. However, among them, a difference could be made in relation to the character of the semantic information that

defines the source of the uniqueness of particular element. Based on that, they are divided into geometric, symbolic and legendary unique artefacts. Redundant artefacts include those items that, due to their multiplicities and repetition, form categories with different characteristics. A convenient way to make a difference among them is the establishment of a category in relation to the scale. Thus four subtypes are distinguished and they include urban furniture, buildings, urban scenes and street network.

Table 1 Urban artefacts: Unique vs. Redundant (Portugali 2011)

UNIQUE ARTEFACTS	Geometric uniqueness
	Symbolic uniqueness
	Legendary uniqueness
REDUNDANT ARTEFACTS	Urban furniture
	Buildings
	Urban scenes
	Street network

By observing the city in general, its face is not determined only by buildings, but also by the streets, rivers, waterfronts, squares, etc. (Vukmirović 2014). Given the above, similar approach that determines the quantity of information carried by the object can be used for the streets. In contrast to buildings, the street can be observed through the geometry of the street network, the dominant content and distribution of open public spaces.

3. SPECIFICS AND PHYSICAL CHARACTERISTIC OF PEDESTRIAN NETWORK

As mentioned above, the analysis of the cognitive maps of the cities has shown a series of elements[4] that could represent key physical characteristics of a particular area. The reason for this is seen in the ways in which an individual acquires knowledge of a particular city, or the amount of information that is carried by the elements of the urban area (Portugali 2011). The researches in the field of memory and categorization have shown that people employ a different type of memory considering the circumstances and cognitive tasks. Thus, the short-term cognitive maps are engaged when somebody asks another one to explain how to get from one place to another. Autobiographical cognitive maps are called to describe the place where we grew up or the neighbourhood, while C-maps are used when people find themselves in the city where they never were before

The difference between the ways in which citizens and new residents formed their own mental maps of the area, can be seen in the examples of autobiographical cognitive maps. While researching that kind of memories, it was thought that autobiographical cities are dynamic entities that change over time and that are sensitive to signals that generate them. Thus, the mental map on which is presented the place where the respondent lived is richer than the map of the new place of residence. Landmarks and districts dominate the first maps, while paths dominate the second.

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[4] Paths, edges, nodes, landmarks and districts (Lynch 1960); points, lines, areas and surfaces (Gollege 1990); centres and corridors (Ellin 2006); connections and destinations, etc.
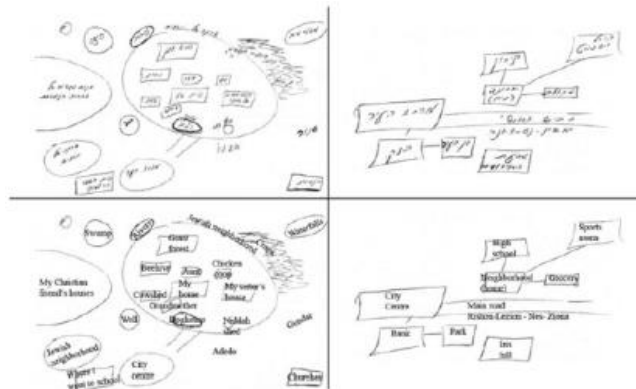
Fig. 2 Place where the respondent has lived (left) and the new place of residence (right)
(Portugali 2011, 126).

Considering the ways of constructing cognitive maps, the formation of the network of pedestrian places could be analysed on the basis of its simplified structure, which includes identification of paths/connections and destinations/nodes. 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, connections function as water canals and correspond to the streets in which the most of the movement takes place.

Connections and destination are analysed in relation to the spatial coverage determined by the value of acceptable length/duration of walking. It is determined by unit of time (15 minutes) or the unit of length (up to 1,000 m). Thus reasonable walking length determines the walking area, which corresponds to a square mile, or 1 km2 and in relation to walking we are interested in places that generate the highest level of life in open public spaces. Thus, the most successful urban areas could be analysed on different scales, but their common characteristics are that they could be reached in 10 minutes walk and that they have a large number of intersections (Montgomery 1998). The most successful urban areas cover an area of about 1km2 and have about 250 intersections, sometimes much more[5] (Jacobs 1995).

On the other side, the experience of the city as well as pedestrian space corresponds to the area covered by the frame of sight of pedestrians, which has its optimum width, height and depth. Pedestrian frame of sight could be also characterised as its sensory field, because this space is rich in stimuli that act on other senses, through which it is possible to achieve a significant effect on the formation of experience. The sight, determined by pedestrian field of view provides an overview of the existence of landmarks that are associated with the beginning and end paths intense interaction with the environment in the immediate vicinity. Thus the face of the city that is displayed to pedestrian covers also unique and redundant urban artefacts.

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[5] Amsterdam 600, Toulouse 330, Mayfair in London 420, etc.

Considering the elements of cognitive maps that show the key elements of the physical structure of the city, as well as the character of the unique and redundant urban artefacts, cognitive performances of the pedestrian network will be analysed on the city and detail level on the case study of pedestrian network of the City of Belgrade central area. On the city level the study included the elements that cover the character of the street network, paths and destinations, main activities of the places, tourist and local's attractors and city events and their temporal distribution over the year. On the other side, on the detail level were analysed the redundant elements and belong to the category of urban equipment and furniture and thus generate recognition of a certain area.

4. CASE STUDY BELGRADE

4.1. Belgrade's central pedestrian network on city level

The pedestrian network in the Belgrade city centre covers the area of 0.79m2 that is 0.22% of the total surface of the city. On that polygon it was identified 13.718m of vehicle routes and 2.781m of paths that are pedestrian only. Considering the mentioned lengths of the paths and by comparing the relation between them, there is a conclusion that the ration of 5:1 in favour of vehicle routes.
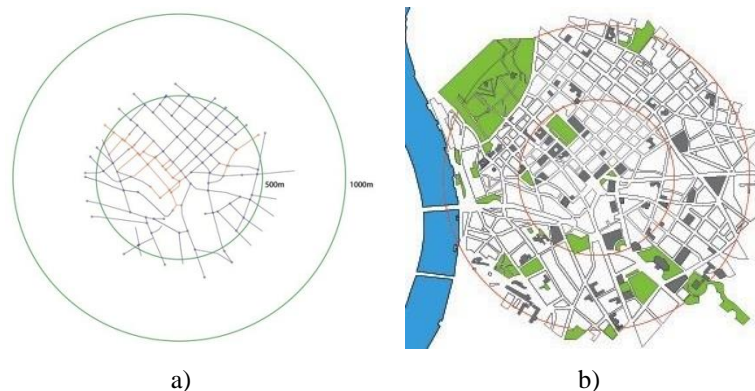

a)   b)

Fig. 3 The pedestrian network in Belgrade city centre
a) Paths and intersections and b) Attractors. Source: Vukmirović

The network is formed of 40 vehicular and 19 pedestrian paths whose traverse creates 112 intersections (see Figure 3a). Compared with the optimal number of intersection of 250, it is concluded that there are 138 intersections less than necessary.

By an examination of the strip-map of Belgrade (see Figure 4) it was found that the area covered by the imaginary circle of 500m in radius includes 27 attractors, distinct to the space of 1000m in radius where 71 attractors are mapped (see Figure 3b). Besides the objects that have been noted as unique artefacts (geographic, symbolic or legendary), there are buildings that are protected cultural monuments. The buildings of great importance for the Republic of Serbia at the research polygon are Belgrade's Fortress, Dositej's Lyceum (Dositejev licej), Captain Misa's Mansion (Kapetan Misino zdanje), Princess Ljubica's Residence (Konak kneginje Ljubice) and the Congregational Church (Saborna crkva) (Универзитет у Београду,

Шумарски факултет и Институт за архитектуру и урбанизам Србије 2012, 21). In addition, there are also allocated a dozen of monuments of big importance[6] and dozens of cultural monuments[7] (Pejić, 1998, 105-124).

Fig. 4 The Belgrade city centre strip map. Source: Mia Luzajic

Belgrade tourist map presented at the Trip advisor's web portal shows 67 localities that have been identified as Belgrade's attractions allocated by the visitors. The most selected of all the mentioned attractions is Belgrade's Fortress (see Figure 5). Other locations that visitors have been singled out are Republic Square, followed by Skadarlija (3), Church of St. Petka (4), Knez Mihailova Street (6), National Theatre (8), the Danube (11), Belgrade Zoo (14) Congregational Church (17), the Church of the Holy Mother of God (18) Dorćol (20) and Princess Ljubica Residence (24).

Fig. 5 The Belgrade's Fortress – the most selected attraction by the visitors.
Source: Serbia4Youth

Diagram created by Eric Fischer shows which parts of the wider area of Belgrade are the most visited by tourists. It clearly shows the path of Knez Mihailova Street, Terazije and Republic Square, the area around the Princess Ljubica's Residence and the Congregational Church and the path of Paris streets with the upper part of the Belgrade Fortress (see Figure 6). In addition to the isolated location, the movement takes place in the wider area of the

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[6] Bajrakli džamija, Jevrem Grujić's home, Narodna banka, National museum, Moskva hotel, National theatre, etc. (Pejić, 1998, 105-124).
[7] Agrar bank, Balkan cinema, Čukur česma, Mika Alas's home, Ethnographic museum, Ruski car cafe, Iguman's palace, Cafe ?, etc. (Pejić, 1998, 105-124).

mentioned places and extends towards the Danube and the Sava waterfronts and along the Boulevard of King Alexander.
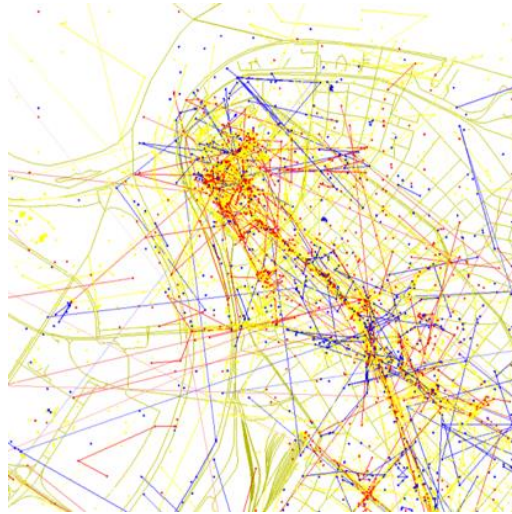

Fig. 6 Belgrade - Locals vs. Tourists. Source: Eric Fisher

The results of the analysis (see Figure 7) of the research area have shown that there is no unique content that dominates the location, i.e. defines the character it. They also have shown that within the selected network of pedestrian spaces the most frequent are cafes (30 in the radius of 500 m or 47 within a radius of 1,000 m), in the second place are restaurants (13 in a radius of 500 m, or 23 in a radius of 1,000 m) and the third are banks (a total of 15 banks within a radius of 1,000 m). Cinemas and major retails are the least present at the location.
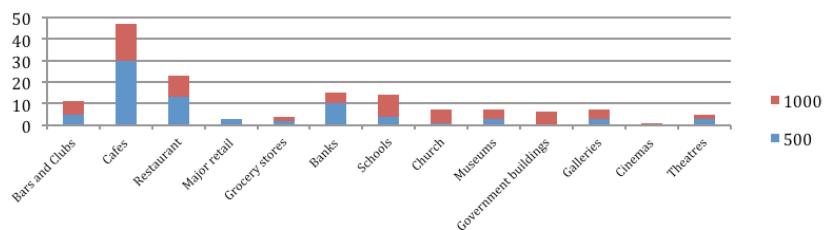
Fig. 7 Contents present at the research location. Source: Vukmirović

During the year, there are 40 public events at the location covered by the network of pedestrian spaces in the city centre (Author 2013). Considering the period when they occur at the monthly basis (see Figure 8), the largest number of the events 6) is held in April and October. On the other side, the lowest number of the events took place during the February (1), January, July, August, September and November (2).
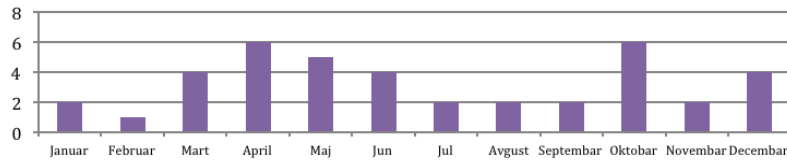
Fig. 8 Belgrade - Distribution of the major events during the year. Source: Vukmirović

In accordance to their thematic category, the most of the events belong to the category of art and design (16) followed by the category of music and dancing (6). The most of them have decades long tradition like the Belgrade Summer Festival (BELEF), the International gathering of the children from Europe, the Belgrade Music Festival (BEMUS), the October salon, the The May Exhibition, the Belgrade Jazz Festival, etc. In addition to the mentioned events in the field of culture, the past few years has triggered by the developments of design events such as Belgrade Design Week festival Mikser, Resonate festival, etc. By keeping regular the occurrence Belgrade Fashion Week aims to present the Belgrade fashion scene - young less-known authors and those who have already positioned on the local fashion scene.

Fig. 9 Belgrade public events: BELEF, Days of Belgrade,
Belgrade fashion week and civil protest

In addition to the mentioned, Belgrade is also known for the events organised in the form of political protests (demonstrations, engaged performances, carnival celebrations, etc.) that have occasionally occurred in late XX and early XXI century. Because of that, the city is represented as the capital of historical initiatives in terms of organised mass protests and strong civic passions of social action. The most common gathering for political purposes happened at the Republic Square and the Plateau in front of the Faculty of Philosophy in Belgrade.

4.2. Belgrade's central pedestrian network on detail level

I accordance with the detail level of analysis, the study covered several types of urban elements that could be characterised as redundant. They include temporary structures - kiosks, moving objects - stalls, seating surfaces and elements, communal elements and lighting.

4.2.1. Temporary and moving objects

On the selected area of Belgrade's central pedestrian zone two types of small structures have been identified: temporary structures - kiosks and mobile objects and counters. Kiosks are characterised by the existence of internal workspace, mainly for one employee, and they are used for selling newspapers, lottery, flowers, etc. On the other side, counters are elements

of fixed or mobile character, while the person who is selling the goods stands next to it. Counters are used for selling souvenirs, traditional items or ice cream.

During the nineties the number of temporary structures has increased uncontrollably. In the same time the elements had experienced rapid transformation and expansion by addition of the new elements like ice cream refrigerators, canopies, shelves, etc. This led to the usurpation and degradation of public space, creating obstacles along the pedestrian corridors and the emergence of negative connotations linked to the culture of the kiosks. It should also be noted that there are several regulations in this area, but they were not fully implemented, especially in the parts relating to the dimensions and appearance of the objects.

a)   b)   c)

Fig. 10 Temporary structures: a) kiosk, b) postcard and souvenir stall
and c) movable counter for selling popcorn.

From a total of 53 kiosks located on the territory of the municipality of Stari grad, 10 properties are places on the study area. Regarding the movable structures, 35 items are placed on the study area. They include 8 popcorn apparatuses, 3 stalls for postcard and tourist brochures, 4 rotary newspaper stands, 2 stalls for artistic souvenirs, 1 stall for book sales, 16 ice cream conservators and 1 chestnuts and corn device. The most of the mentioned items are located along the Knez Mihailova Street, the Republic Square and the Terazije Square, where is also the largest amount of visitors and pedestrians. Although the city and municipality legislation regulates the position and content of the temporary structures, the analysis of the physical properties of these objects is found that they are not sufficiently coordinated. This is primarily related to the form, materialization and colour (see Fig. 10). In addition, a certain degree of problem occurs in the domain of the goods placed in certain places.

4.2.2. Seating surfaces and elements

Within the network of pedestrian spaces sitting takes place on public surfaces and urban elements (stairs, upper walls, benches, etc.) and in gardens of the cafes. For this purpose are used the fixed elements, which are an integral part of the street or square and different kind of benches.

Benches as elements of urban furniture appear as independent or as components for seating associated with some other element of urban furniture into a unified whole. Standalone benches are mostly located in the park areas. In the area Toplicin venac two types of benches were observed. They vary according to the time when they are set and the colour. The first model of the benches is related to the period when the park area was

created. They have a concrete structure with wooden components designed for seating and backrest. Another model of the bench was recently set up. Mobile operator Telenor financed it. Benches have a metal substructure and a sitting area and back patch made with wooden planks. Each bench is in a different colour. Along the Knez Mihailova Street and on Republic Square sitting elements are combined with other elements - plant containers. In addition to the mentioned elements, stone cubes, made from the same material as paving of Knez Mihailova are used for sitting. In the area of Plateau in front of the Faculty of Philosophy, low wall lined with wooden beams is adapted and conceived as sitting element.

| a) | b) | c) |
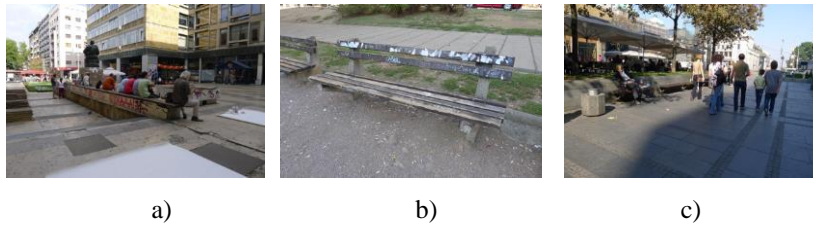
Fig. 11 Seating elements: a) Plateau in front of the Faculty of philosophy,
b) Bench on Topličin venac and c) Sitting element on Republic Square

Unfortunately, most of these elements are in a very poor condition (see Fig. 11). Such an image contributes to the creation of negative impressions about the areas in which those elements are located. In cognitive terms, this points to the areas that have been neglected and that should not be visited.

4.2.3. Communal elements

Communal elements that were analysed in pedestrian zone include public toilets, litterbins and flowerpots and boxes. Public toilets are located below the surface with direct access or in underground passages. There are five public toilets on the selected territory. In recent years the toilets have been restores and they are in decent condition, but the most of the citizens complain on their working time.

Litterbins occur in several types and vary in relation to the form, materialization and size (see Fig, 12). The largest number of litterbins is made of concrete, with a metal bowl that can be discharged. Another type of litterbins is cylindrical in shape, made of metal and is placed on the vertical supports or poles for lighting. They have appeared in recent years, but most of them are in poor condition due to bad maintenance and poor quality. The third type of litterbins includes elements that are specifically designed for Knez Mihailova Street. They are made of stone, the same one used for the pavement of the street, and casted bronze. The design and materialization of these litterbins are aligned with other elements applied in this area. The fourth type includes waste containers that appear in the form of aboveground and underground. The aboveground containers are large volume containers made of metal or hard plastic. Underground containers have an insertion element, small in size, made of metal and placed on ground, while the underground disposal element is so dimensioned to receive a larger amount of garbage.
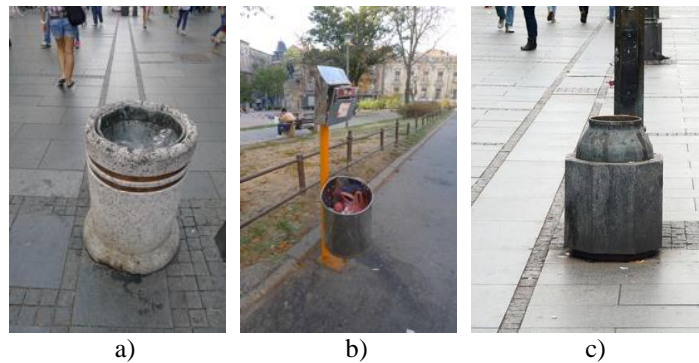
Fig. 12 Litterbins: Made of a) concrete, b) metal and c) stone and cast bronze.

Flowerpots and boxes appear as independent elements made of concrete or stone, while their form can be rectangular or hexagonal. Along the Knez Mihailova Street plantings are regularly maintained, which is not the case with flowers in the boxes in other parts of the selected territory, like the Plateau in front of the Faculty of Philosophy.

The majority of communal elements have obsolete function or inadequate looks and maintenance. This situation need to be improved in order to meet the evolving needs of users and achieving adequate effect that these elements can produce, both in functional as well as aesthetical way.

4.2.4. Lighting

The analysis of style, form, height and position of public lighting, i.e. public lighting elements, as a result has shown that there are several types of luminaries. Given a few styles applied in the design of these elements subdivision is made in relation to their function: 1) lighting elements placed on high columns that illuminate main streets, 2) lighting elements with traditional or contemporary appearance that illuminate sidewalks and give them a special atmosphere, and 3) elements placed on building facades directly or via a cantilever carriers.
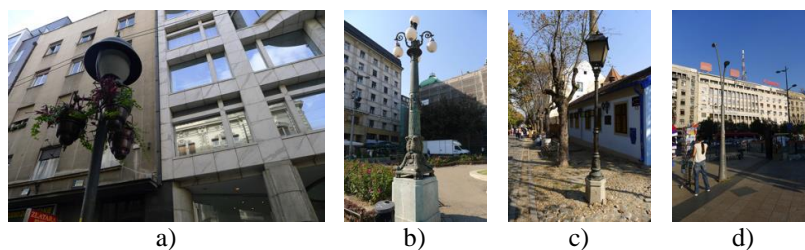

Fig. 13 Lightings that illuminate sidewalks: a) in Knez Mihailova Street,
b) on Republic Square, c) on Skadarlija and d) nearby Terazije's fountain

The second type of luminaries is present at selected locations and contributes to the formation of the overall image of them. These lamps are designed and placed in the pedestrian zone of Knez Mihailova Street. The lamp was designed by Branislav Jovin,

author and leader of the Project of reconstruction of Knez Mihailova Street in eighties. With this design he wanted to revive the former look of the centre of Belgrade, but at the same time to adjust the development aspirations of contemporary architecture and design. In addition to these the contribution to the overall effect is also given by ambient lamps placed around the Prince Mihailo's monument on Republic Square, traditional candelabra placed in Skadarlija, as well as contemporary lamps placed nearby Terazije's fountain (see Fig. 13).

Considering all kinds of elements of urban equipment analysed in this study it was noted that elements used in Knez Mihailova Street have been specially designed for this space. Therefore they form a family of elements (see Fig. 14) used exclusively in the area of pedestrian zone and as a result contribute to the distinctiveness of this area.
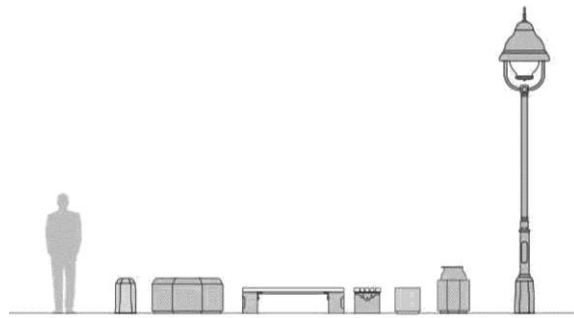

Fig. 14 Elements of urban equipment designed for Knez Mihailova pedestrian zone, designed by Branislav Jovin.

Having in mind the actual state of the urban equipment in Belgrade on one side and the importance of the redundant artefacts in the formation of the image of particular public spaces as well as the city as whole on the other, several actions in the regulation domain have been started. The first was that a uniform appearance of kiosks was adopted (see Fig. 15), stalls and moving objects on the city level in late 2015.

Fig. 15 New look of kiosks. 3D by Masan Petrovic

Other initiatives are related to the adoption of a Catalogue of urban equipment for the City of Belgrade (Folić/Vukmirović 2016). Catalogue is created as an integral document that defines the guidelines for the selection and installation of urban equipment, furniture and textures in the territory of the city of Belgrade.
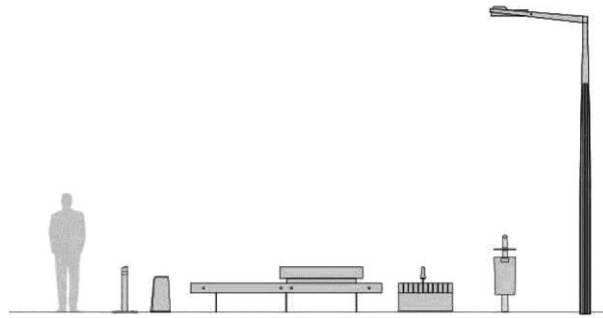
Fig. 16 Urban equipment that will be used in Belgrade's central area

The document defines the characteristics and appearance of the individual elements, as well as their spatial applications within the defined areas of the city. A certain family of elements that differ in form and materialization characterizes each zone. Pedestrian zone in the centre of the city belongs to the fourth zone and its urban equipment is characterized by simple forms and natural materials - wood, stone, metal (see Fig. 16). Catalogue began to be implemented in early 2017 and the first results of its application will be seen by the end of this year.

5. CONCLUSION

On the basis of the presented results it could be defined general recommendation that need to be implemented in order to improve the quality of the network of pedestrian spaces in the Belgrade central area with the special attention paid on the cognitive performances of the pedestrian space seen from the city and detail level. This needs to be done simultaneously, in the domain of physical as well as in the functional domain, because they both participate in the creation of the pedestrian experience.

Having in mind the complex character of cognitive maps that include the most important elements of the physical as well as functional character of the city understood as unique and redundant artefacts the recommendations for the network of pedestrian spaces in the city of Belgrade include:

- The correction of the ratio between pedestrian and vehicle paths in favour of pedestrian routes
- Increasing the number and balanced distribution of urban attractors
- Stimulation of the appearance of contents that increase the attractiveness and usage period of pedestrian/public space
- Gradual expansion of pedestrian routes and the intensity of everyday movement in pedestrian area.
- Establishing balanced relations between events that aim to generate a collective and cultural identity with events that represent the city.
- Giving a special attention to the redundant artefacts - elements that belong to the category of micro urbanism because they play an important role in recognition of a certain area.

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KOGNITIVNE PERFORMANSE PEŠAČKIH PROSTORA

Ako grad i njegovu fizičku strukturu shvatimo kao neku vrstu proširene, spoljne memorije ljudskog uma, mogu se uočiti dva aspekta. Prvi se odnosi na karakteristike grada i pojedinačnih prostora koji pomažu prilikom orijentacije i utvrđivanja putanje kretanja građana i posetilaca. Oni se mogu istraživati putem mentalnih mapa, odnosno kognitivnih mapa. Drugi aspekt obuhvata elemente koji doprinose stvaranju identiteta i imidža mesta. Posmatrajući pešački prostor kao okruženje koje ostvaruje najintimnije relacije između posetilaca i grada, rad nastoji da predstavi elemente koji se mogu smatrati kognitivnim performansama pešačkog prostora. Oni će biti analizirani na teritoriji koja obuhvata pešačku zonu smeštenu u centru grada Beograda, a sa ciljem da se utvrde postojeći i budući elementi koji će doprineti širenju i intenzivnijem korišćenju ove zone.

Ključne reči: *pešački prostori, komunikacija, kognitivne performanse, Grad Beograd*