



Magyar Agrár- és Élettudományi Egyetem

METHODOLOGY OF IMAGE PLANNING OF URBAN OPEN SPACES

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INTRODUCTION

With the expanding free labour market in the Western world there is a fierce competition in urban development to create more attractive localities. The development of public spaces became the main tool of urban planning, since much faster actions are necessary to satisfy the rapidly changing needs of today's city dwellers than those urban re-dimensioning actions taken during former urban renewal plans.

Thanks to regulatory and sectoral policy measures, impacts on streetscape has been shaped in a complex way, as a result of different processes. The objective of urban design is to harmonise the processes driven by various fields of expertise. The quality of a public space can be drastically improved with small interventions adapted to use. In some cities, streetscape harmonisation is linked to a thematic development program (traffic calming, water management), which is implemented through the infrastructures that permeate the city. The best-known examples, however, attempt to cover the whole spectrum of public space use and to shape the elements that determine the quality of public space in an interrelated context. Ezek a segédletek az arculati tervezés folyamatát is koordinálják céljuk pedig nem csupán a városi szabadterek újratervezése. A hely értékének növelését a felmerülő használati igényekre adott adekvát válaszokkal érik el, aminek eredménye nem függ össze a látványos változással.

OBJECTIVES

Urban open spaces (in accordance with the scale and role of the given settlement) must provide space for a number of interconnected usages (social, economic, ecological). In my research, I examined the regularities of the visual appearance that meet these expectations, keeping in mind the usage, and the aesthetic and ecological aspects, and the possibilities of coordinating the knowledge elements of different design disciplines. Thus, one of the focuses of the research was the exploration of the connection of the landscape, the settlement and the urban open spaces and images, and the exploration of the processes that determine their joint formation and planning. After getting to know the aforementioned relationships, the tasks related to the design that nowadays require the expertise in landscape architecture can be defined. After that the roles of landscape architecture in these tasks can be specified. I set out to answer two main research questions in this respect:

- Through which components and according to which organizing principle was created the image of public spaces that can be seen today, and how do the components relate to each other?
- How do those cities who have outstanding performances shape the image of urban open spaces today? What methods and tools are used by them?

The second part of the research investigated the impact of design guidance on the quality and use of public spaces. It is assumed that the objectives of the design guidances have been defined on the basis of urban development principles that take into account the needs of the users. Thus, examining the various topics can contribute to understanding the processes that shape the use of a public space. We also wanted to explore the extent of the emergence of globalisation in the

physical and abstract interpretation of the street scene. For the study of the topic, the following research questions have been formulated:

- Is it possible to prove that there is a type of design guidance that is made according to almost uniform criteria around the world?
- What objectives urban design guidances aim at? What are the specific urban design topics for achieving the objectives set?
- Should we fear the globalisation of the appearance of public spaces in the case of DGs made according to uniform criteria? How do urban design handbooks and planning guidance relate to general user needs and the protection of local character?
- What guidance processes are involved in shaping the streetscape, and what are the user needs that these processes favour?
- Are there aspects that could set a new direction for DGs?

To answer the researcher's questions, after interpreting the phenomena related to the topic, the thesis is aimed at the understanding of the physical appearance and the investigation of the planning methodologies of the images.

MATERIALS AND METHODS

The research was conducted in two stages. I examined the elements of the public space images that appear as part of the system of urban open spaces, from the perspective of the awareness of the image and planning, as well as the relationship between the image and the usage, as well as with regards to the change of the space walls and the installation. In the first stage of my research, I establish my conclusions based on images. Through the photos, I searched for information about the situation before the development of that today now complex image of the examined public areas. In this way, I was able to follow the transformation of the quality of the public space, which I believe helps to understand the reason or reasons for the change in the image of the public space, and thus the design goals and the intentions behind the change can be determined. For this purpose, I chose reference elements displaying characteristic changes, and I represented these changes on a diagram in time and space. Based on the shape and position, I also deduced the spatial role of the individual elements, which also gave a clue to the hierarchy of uses appearing through the examined elements.

In order to examine the design methods, I analyzed international case studies and design manuals, in addition to studying the scientific literature. My goal was to find out that in international comparison, which typology the settlements considered successful and shaped their urban open spaces and, in this context, along which planning processes they shape the character of public spaces. I examined the realization of the projects and the current planning manuals based on Google Street View recordings of a total of 22 main streets in New York, London, Rotterdam, Zurich, Prague and Adelaide.

RESULTS

1. By analyzing the change in the character of public spaces, I proved that the visual design of urban open spaces is a design task that integrates different expertise and can be separated from the design of buildings. Among the elements that determine the urban structure, built-in elements are primarily shapes the usage of the place, while green surfaces primarily shape the way the place is used, however, the urban purpose and the planning of local usage appear together in the city image.

2. Throughout the development process of the settlements taking place with a modern approach, the shaping of the spatial quality and its usage possibilities is the guiding principle. For the professional denomination and evaluation of these activities, I introduced the concept of public space character, for which I created the following definition: "The public space character appears as part of the urban open spaces, it means the image resulting from the relationship between the purpose and usage of the urban structure of the place."

3. The public space character can be used as a concrete term to define the abstract concept of spatial quality, therefore it can be used as a tool of city governance to define the specific quality requirements, value to the society, of locations entrusted to market development.

4. The quality of the image design primarily depends on the usage and the planning of the hierarchy of the different usage possibilities. Thus, I pointed out that in the system of urban open spaces, the image of the public space is primarily defined by its usage.

5. I defined the settlement infrastructures and networks necessary for the description of the character of the public space (track-based traffic, car and motor

vehicle traffic, bicycle traffic, network of elements for pedestrian usage, telecommunications, system of green areas, public lighting). In my research, based on data from Budapest I determined the changes in the character of the city's public spaces. Based on these, I separated six eras in Budapest between 1866 and 2016, in which the transformations of the networks defining the character of public spaces showed a characteristic pattern, which can be related to the change in the character of public spaces. Based on all of this information, I established that the elements of the networks characterizing the public space can be linked to eras and show characteristic temporal and spatial stratification. This stratification not only reveals the change in the value of a given place (as an area) and the spatial quality that can be assessed at a given age, but also points out that the elements of the networks maintain the value and quality of the space (as an area) if they are renewed in 20-30 years cycles, within the framework of comprehensive planning. Thus, it is worth planning the coordination of projects involving urban open spaces, as well as the lifespan of the equipment elements of the projects according to this cyclicity.

6. The development of networks characterizing the public space and the usage based on the results of the development, as well as the evaluation of visual content, can be carried out with a two-part procedure.

The first part can be used to determine the changes of the character of the public area of the settlement (eras). The steps for this are the followings:

- The development of the networks characterizing public space must be examined in relation to themselves and then represented on a graph, where one axis is the degree of development (e.g.: the experimental appearance of the elements of the network; the real appearance of the elements of the network based on experiments; the regulation of the network, due to that it is becoming complex; the usage of a given network becomes common in the settlement), the other axis is the time of the change of the development.

- In the graphs, the characteristic changes must be searched for and the extreme values of the development processes must be highlighted. In this way, we can define points for the networks of the public space character, on the basis of which the patterns characteristic of each network must be found and then compared. Following the axis of temporal change, patterns showing sameness define the boundaries of change of the eras.

The second part can be used for image-based public space character assessment, with the following steps:

- Networks characterizing the public space character must be identified on the image, and then the role and importance of usage of each network must be estimated. Then the estimated values must be categorized (e.g.: does not prevail, prevails, emphasized, dominates the character of the place).
- The value of the role and importance of usage of each networks must be distinguished numerically or visually. If a network remains unchanged for several eras, the era in which the given state was created must be marked. It can provide additional information about the change in the value of the network in public space through obsolescence and maintenance.

7. Based on locations in Budapest, the following regularities can be observed in the processes of changing the public space character:

- An increase in the quality of the space occurs when the prevalence of green areas reaches or exceeds that of high-speed transport modes. In these cases, it is usually possible to renew and expand the elements that support pedestrian use.
- If one network becomes prominent and even becomes a character-shaping factor of the given place, but also provides space for other

- networks, the different possibilities of usage and visual uniformity typically do not affect the quality of the space.
- If the influence of a single network overrides all of the other aspects and starts to dominate the character of the place, the quality of the space decreases.

8. It can be concluded that, through the interaction of the networks appearing in it, the planning of the public space character can generate changes in the scale of the landscape beyond the added settlement, in addition to increasing social and economic values.

9. Examining 29 international planning manuals, I found that the contemporary discourse on the shaping of the city image, in addition to urban ecology issues and traffic planning strategies, is thematized by all-time usage and globalization, which, based on the examined documents, can be regulated by the intentional shaping of the public spaces character.

10. Based on international examples, examining 22 main streets on the basis of 6 manuals, I proved that the planning manual of public space character not only helps projects as an alignment point, but can also act as their catalyst. In other words, based on the analysis carried out on 22 main streets, the goals of the manuals are effectively realized and it can be observed that even the preparation of planning manuals of the public space character had an impact on the investigated locations. Furthermore, it can be stated that, as a result, additional locations were renovated in a systematic way. In other words, the process of preparing the planning manual seems to be even more significant (in shaping the image and character of the public space) than its concrete appearance. These manuals, in addition to creating a uniform quality of public space in settlements, initiate research into the economically, ecologically, and socially effective shaping of the city image.

CONCLUSIONS AND PROPOSALS

In my research, I found that image issues mean much more than visual content. They are related to the comprehensive use of open urban spaces. Based on international examples, I pointed out that in the planning process the role of the landscape architect is to determine the character of the public space, which is characterized by the elements and the usage of networks appearing in the public space; and also how the change in the hierarchy of the layers affects the change in the quality of the space. The history, the development and the dimensions of the appearance of these networks (visible, non-visible and invisible presence) can be interpreted in layers that appear in 20-30 years cycles. The layers show a characteristic pattern based on their temporal appearance and spatial extent. The pattern of each era reflects the imprint of the society's ideas.

The planning manuals reflect that one of the most important intangible values of today's society is the protection of the vulnerable, and to ensure their full involvement in the urban life and in the market cycle operated by cities and regions.

One of the most important intangible values of today's society is the protection of the vulnerable, and to ensure their full involvement in the urban life and in the market cycle operated by cities and regions. The use of urban space by children, the elderly, and people with disabilities is a matter of priority. Typically this is regulated by expanding transport opportunities and the reduction of motor vehicle traffic. The studied publications indicate that currently the handbooks concentrate primarily on the regulation of traffic. In each handbook, any of the 9 components related to traffic occurs in a frequency of 73.68%, while any of the 5 components of urban ecology is only present in a frequency of 47.37%. The

coordination of different network-like elements of the city has yet to be achieved. To do this, more data is needed, and in the age of big data, digital solutions can deliver them. Less than half of the studied cases (42.11%) is heading into this direction, mostly among publications of Anglo-Saxon origin.

LIST OF PUBLICATIONS

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