Sociocultural aspect of landscape components in the conditions of urban environment

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Abstract. Applying the scientific discourse approach, the article examines different aspects of landscape design related issues. We analyze the fundamental principles of landscaping to examine its connections with sociocultural aspect. Terrain, water, and vegetation, as aspects of landscape design and the connections with culture and society are analyzed. Their functional significance uncovered within the framework of sociocultural aspect. Various combinations and relations of the landscape design components are analyzed from the viewpoint of their social and cultural focus. We revealed the sociocultural aspect of landscape components in the conditions of the urban environment. The development of landscape components should be applied using a bionic formative element that includes the sociocultural aspect of the region. The cultural recognizability of scenery components creates a psychologically comfortable environment in the cityscape.

1 Introduction

The development of contemporary civilization is focused to a great degree on the growing role of large cities. The urbanization process in the cityscape lays significant relations between its specific elements such as ecology, urban environment, aesthetics, urban ecology, and others. The urbanized environment reveals a number of issues associated with the mentioned elements. As such, exposure and investigation of these problems become a matter of scientific study. Academic interest is based on various approaches and viewpoints. Therefore, different sides of the research subject are considered. Belyakov and Makarova note that under the conditions of a contemporary ecological situation green space appears to be an important factor in optimizing the development of urban areas. The authors investigate the ecological side of urban landscapes, pointing out that the presence of plants stabilizes and reduces the tension of the urban environment [1]. Krasilnikova, Zhuravleva and Zaika consider the creation of therapeutic landscapes in the structure of greenspace expansion in medical facility. The authors highlight the role of the psychophysiological aspect (positive therapeutic influence, precisely) of these landscapes [2]. Sheina and Yudina propose a spatial analysis of the green space density method based on its distribution within the city. The method is proposed in connection with a research on environmental comfort for the population in urban areas [3]. Babayan, Bobkina, and Seferyan study the problems of gardening the urban landscape of a large city. They revealed the basic elements of a green

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expansion plan and pointed to the longevity of tasks and objectives in creating green spaces in cities [4]. Moralova, Petrova, and Terekhova, through the lens of an ecological basis, problematize the formation of complexes that territorially and functionally connect urban landscape areas and open spaces [5]. Alexandrova and Kovaleva consider the predesign analysis of landscape architecture objects and with a special attention to details raise issues related to the use of modern methods (geological information technologies) when performing the predesign analysis [6]. The most relevant topic of designing modern landscapes is raised by the authors Kachemtseva and Yaichnikova. The authors explore the issue of the relation between modern landscape and tradition with special intensity. In their view, the major difficulty of this question lies in the multi-confessional nature of the regions [7]. The study of special importance was conducted by Chernysheva and Ryzhova. The authors thoroughly consider the spatial and stylistic characteristics of national architecture in estate landscapes of the early twentieth century [8]. Khovrina and Srodnikykh discuss a fairly relevant topic of modern landscape design related to container planting with tree species in the urban environment. The tradition of container planting is commonly used in European countries with mild winters. As of late, this tradition begins to be applied in Russia. Close attention is paid to tree species that have a number of properties suitable for use in the Russian climate zone [9]. Korobova and Dryagalova touch upon the aspect of the psychophysiological impact. However, the issue at hand is not an impact of the landscape but rather the influence of the visual environment on a person. In the authors' opinion, they raise the most important issue in urban ecology, pointing to the formation of an aggressive, uncomfortable visual environment for perception in large cities. Their work contains a large body of data related to the negative impact of "visual pollution on the physiological and psychological state of a person in large cities". From the authors' point of view, the resolution of the issues raised is possible through the use of landscape architecture means [10]. The purpose is to reveal the sociocultural aspects of the landscape components in the urban environment. The main objectives are the analysis of the basic landscape design principles in the search for connection with the social and cultural aspect. The study focusses on:
- analyzing the particular landscape design components such as terrain, water, vegetation;
- revealing the functional significance of particular components for the object in the sociocultural aspect frame;
- considering various combinations of landscape design components and revealing the relationships between them from the standpoint of their social and cultural importance;
- identifying the sociocultural aspect of landscape components in the urban environment.

2 Methods

The research stage is represented by a systematic study of the literature on landscape design topics [1], [2], [3], [4], [5], [6], [7], [8], [9], [10], as well as by conducted empirical and theoretical studies. Empirical data analysis was performed in accordance with the stated purpose. In the initial phase, empirical facts of necessity were collected. The identified empirical facts are analyzed in line with the main objectives. In our study, we used the following methods: analysis, synthesis, comparison, analogy, generalization, abstraction, and others. We applied the mentioned methods to conduct a sociological survey among diverse population groups to find the priority of landscape design components usage in the urban environment. Among the interviewed, 85% of the participants expressed preferences for the use of "living" components, the increase in bio-comfort of the environment and the expansion of recreation space.
Table 1. Analysis of a survey of citizens on the landscape components

<table>
<thead>
<tr>
<th>Age group</th>
<th>Pedestrian zones</th>
<th>Recreation space</th>
<th>Therapeutic gardens</th>
<th>Green urban shell</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aged 18-30</td>
<td>25%</td>
<td>45%</td>
<td>15%</td>
<td>75%</td>
</tr>
<tr>
<td>Aged 30-60</td>
<td>45%</td>
<td>60%</td>
<td>55%</td>
<td>75%</td>
</tr>
<tr>
<td>Aged 60-75</td>
<td>75%</td>
<td>70%</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

The development of landscape components should be implemented using a bionic formative element with consideration of sociocultural aspect of the region, as 80% of the respondents believe. Cultural recognition of scenery components creates in the city space a psychologically comfortable environment. Pedestrian areas should be complete with urban furniture and recreational spaces equipped with a wide array of bioavailable tools. There, the need for the implementation of therapeutic gardens in the frame of creating favourable areas for relaxation and maintaining the health of citizens is marked. The creation of comfortable areas for health, the benefits of the "living" components of the natural environment, the integration of fragments of the natural environment with the city infrastructure have a positive review in the work of therapists and psychologists.

3 Results

The end of the 20th century and the beginning of the 21st century were marked by a further increase in the role of large cities for the general population of the world. This process is named with a precise notion that is urbanization (from the Latin word "urbanus" means "to belong to a town"). Urbanization is a powerful factor closely associated with the strengthening of socioeconomic influence zones, the complication of goods logistics, and the increase in the information and visual information zone related to the field of communication. The localization of these circumstances, as well as the fact of their solidification and increasing tendency, inevitably affect such spaces as society, culture, and the sociocultural aspect of landscape components in the urban environment. In our study, we consider "society" as a certain large community of people united by social and cultural ties. "Culture" is understood as the activity of people for the sake of reproducing and renewing social existence, as well as the products and results of these actions [11, p. 216]. At last, the "sociocultural" concept conveys a certain community of people in a particular culture. In order to achieve the study purpose, it is necessary to touch upon the history of the issue and connected topics. The present literature and research on the history of landscape design allow us to select the necessary empirical data. Brief reference analysis is given in the "Introduction". The basic principles of landscape design (herein, we consider the creation of a specific project), in addition to a number of components, are closely related to the form generation, laws of composition, and ecology. Considering the title of the study, this point of view has drawn our interest to study the meaning of the landscape design object. Form generation can be taken as human activity during which a new object appears. Special attention is drawn by the requirement for this new object made by society. Such an object must contain elements of the cultural code inherent in a particular community. This circumstance is dictated by to the fact that such an object must be in demand at the cultural level in the first place. Form generation of the object is linked with important elements such as volume, scale, surface, texture, plasticity, rhythm, and colour. All of the above play a role in the landscape object composition creation process.
Precisely from this standpoint, they become involved in the cultural aspect. In recent years, due to the increased attention to environmental topics, the requirements for the object's environmental friendliness have become a significant element when creating landscape design objects. With this approach on hand, the landscape design object receives a new dimension associated with global world trends. Kireeva in her article [12, p. 44] calls the works of Friedensreich Hundertwasser (1928-2000), an architect, artist, and designer, a striking phenomenon of the connection between the possibilities of landscape design and architecture. With his work, F. Hundertwasser drew attention to the environmental problems and the influence of the urban environment on humans. He saw the utmost importance in the return of natural forms to the urban environment, the human environment, which, in his opinion, could be achieved through the planting of the houses' roofs. Ecology becomes the core theme of his writings. In her article, Kireeva thoroughly considers the stages of F. Hundertwasser's work path, his large-scale projects and their influence on society.

When creating a landscape design object by no means unimportant role is played by its components such as relief, water, vegetation, and fauna. Not only surface quality appears as their distinctive feature, but also the scale and the number of elements forming the relief become of great importance. This principle is applicable in theory both for an individual landscape design object and for natural terrain [13, p. 55]. Examples for better understanding the form generation theory and notionally related plastic forms created from paper are presented below. Understanding the possibilities of spatial shaping helps to see possible prototypes in natural relief that can be worked with in the future.

![Image](https://triptonkosti.ru/4-foto/relef-na-bumage-shemy-83-foto.html)

*Fig.1.* The photo is published on [https://triptonkosti.ru/4-foto/relef-na-bumage-shemy-83-foto.html](https://triptonkosti.ru/4-foto/relef-na-bumage-shemy-83-foto.html) [14]
Let us give an example where terrain in landscape design refers to natural terrain:

The form of land influences other components of landscape design and, to a great extent, the creation of the composition [16, p. 131]. The role of plants and their cultural significance (that is, the Japanese garden) are explored in the works of Yurtaeva and Kurochkina [17], [18]. Some quite interesting cultural connections are observed by Khovrina and Srodnykh. To be precise, there are connections between European and Russian traditions in the use of plants in landscape design through container planting with tree species in the urban environment [9]. Water, as a component of landscape architecture, in the Western tradition is considered from the point of its functionality and psychological effects, while the use of water in landscape design in the Far Eastern region contains an even deeper symbolic meaning. A distinctive phenomenon here can be called the Japanese garden and the Japanese Zen garden (dry) [19, pp. 91-103].

4 Discussion

After the empirical data analysis, we can draw the following conclusions:
1. The basic principles of landscape design, form generation and composition of the object in particular, are closely related to such significant components as volume, scale, surface, texture, plasticity, rhythm, and colour. Furthermore, they become included in the cultural aspect.

2. In recent years, due to the increased attention to environmental or ecological topics in the world community, when creating landscape design objects, it is necessary to consider environmental requirements.

3. Applying the landscape design components such as water and plants can significantly influence cultural moods in society.

4. The connection of landscape components with society and culture (that is, sociocultural aspect) can be traced through elements of form generation and composition such as volume, scale, surface, texture, plasticity, rhythm, and colour. It is through their use that the connection of landscape components with society and culture (again, sociocultural aspect) in the urban environment can be traced.

5 Conclusion

The empirical data analysis and the collection of empirical facts revealed a certain set of topics related to research in the field of landscape design. These are both environmental issues and questions of greenspace expansion. The therapeutic possibilities of landscape design and others are also being paid closely analyzed. Our purpose was to discover a possible connection between social and cultural aspects and landscape components within the urban environment. In the process of studying, researching factual information and analyzing it, the presence of this connection was established, that is, relation between landscape design objects and the urban environment. The connection between landscape design objects and the urban environment can be traced through such components of landscape design as terrain, vegetation, and water. We highlight the point that the connecting link between the landscape design object, society and culture (sociocultural aspect) are such elements of the form generation and composition of the landscape design object as volume, scale, surface, texture, plasticity, rhythm, and colour. If the interaction between the natural and artificial environment in urban space is in balance almost at the level of creating a harmonious environment, then it helps to restore the body resources of urban residents. Being in a comfortable environment presupposes a free stay, individualization of visual impressions, and subjective timing of the phases of tension and relaxation. The landscaped environment in the final design version corresponds to the eternal criteria of Vitruvius - usefulness, durability and beauty. The primary task of strength and functionality has as its components an artistic and design image, aesthetic expediency, and a sociocultural scenario. The dominant aspect in the sociocultural scenario, according to the results of sociological surveys, should be the regional component. Pearls of culture and folk art, close to the mental perception of the majority of the population, should be recognized in recreation areas, therapeutic gardens, and recreational areas. The integration of small architectural forms, sculptures, fountains into green areas will form highly artistic complexes that will have multifunctional significance. The semantic and artistic significance of the complexes will correspond to the multinational and multicultural task of enriching the landscape component. Multifunctional tasks of forming landscape components in an urban environment:

1. Creation of a comfortable environment;
2. Aesthetic expediency;
3. Formation of a harmonious visual image;
4. Formation of ecology of space;
5. Creation of cultural and ethnic components of the landscape.

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