

Typological, systematic and structural principles of forming a recreational environment

Abstract

The article discusses the phenomenon of environment and methodological foundations of a typology of architectural and recreation environment with an analysis of its systemic-structural principles. In accordance with that is identified hierarchical levels of forming and development of recreation environment on examples of author's designs.

Keywords: environment, recreation, typology of the architectural and recreation environment, systemic-structural principles, hierarchical levels.

Introduction

The environment in the broad sense is the concept of universal significance and it covers both the natural conditions of material world surroundings of a human, that never experienced human impact (natural environment); and the environment adapted by a human for a variety of processes and types of life (artificial environment). But whatever changes would have been done to artificial forms of material world during their adaptation to human needs, they are basically the product of nature. That is why the environment of human activity almost cannot be completely artificial. The only exceptions are certain processes that require special conditions or completely isolated from the environment. As an example we can use the inner space environment of underwater or space ships. At the same time, the environment of human life hoods is not absolutely natural, because the fact of choice of a one or another environment already involves it into anthropogenic processes. To the natural environment in its pure form can be assigned undeveloped by the human variety of the globe's territories or nature reserves where human activities are absent or extremely limited.

A variety of research studies have been dedicated to the issues of typology of environment [1–6]. These and other authors, relying on the concept of a systematic approach considering environment as an architectural integrity of conditions of the material world of human, that changes in transition from one system level to another. It is noted that, depending on the problems that the architect-designer are facing, there are four levels of environmental design: micro level (object-spatial), meso level (spatial), macro level (architectural planning) mega level (planning). At each level of environmental design, we can distinguish the types of architectural environment that will vary by properties of the material components; by lifestyles and situations of residents' life; by features of environmental philosophy and concepts of the people who created it; by the principles and mechanisms of development [2, p.113].

There are many known definitions and species of the concept of environment, with the term "architectural environment" is the most common amongst them. It consists of spatial (architectural), subject (design) features of the environment state and, in fact, most of this state itself (atmosphere of environment) that exist in the conceptual unity and integrity. Into the basis of the study of characteristics and parameters of certain typological order the main criterion must be assigned – the leading dominant feature. The concepts of environment like residential, industrial, recreational, urban environment, etc., determine its functional features and purpose and determined by the types of human activity. Along with the fact that most authors believe the functional and spatial parameters or architectural environment are primary while creating typological classifications, it is also classified by figured characteristics, morphological characteristics, socio-cultural values, etc.

The of purpose of this publication

An attempt to analyse the typological features and identify the systemic and structural principles, and hierarchical levels of forming a recreational environment with the examples of author's designs.

The main part

Recreational environment is the result of the interaction, interpenetration and complementarity of the three integrated factors: recreational resources, recreational structures, recreational activities.

Recreational resources are the combination of a variety of natural and anthropogenic fac-

tors, creating favourable conditions for recreational activities: recreation, relaxation, prevention treatment, tourism, physical recreation. There are 2 types of recreation resources: 1. Natural recreation resources (climate, relief, waters, fauna and flora) – sea and oceanic coasts, mountain landscapes, forests, lakes, curative mineral water, monuments of nature and other suitable recreational facilities of natural origin. 2. Anthropogenic recreational resources (cultural, historical, social and economic) – artificial reservoirs, beaches, buildings, monuments and other objects of artificial origin. Recreational resources create a recreational profile of specific landscape. However, nature protection needs, economic and technological conditions of landscape development for a specific type of recreational activities contribute to its transformation, recreational development and improvement, i.e. to the establishment of a system of recreational formations.

Recreational formations are the functional set of recreational nature (park, forest park, water park, water basins, new plantings, ski slopes) and urbanized (recreational facility, recreational village, recreation complex, agglomeration) environment, converted for recreation. Recreational formations can be of any size and kind, differing by taxonomic and typological features. The recreational formations include environmental objects and systems for people recreation, restoration of their strength and abilities after work, illness, etc. [6].

However, the main specific property of recreational environment should be considered its emotional and imaginative contrast in relation to the nature of the activity, you are having rest of. This fact should be considered by the designer regardless of the type of recreation and its scale level. Usually recreational activities are divided into two forms: an “active” (physical culture, sports, amateur performing, amateur crafting) and “passive” activities (cinema, television, auto tourism), although the divider between them is quite conventional. As a rule, both forms, in addition to specially equipped and designed spaces for them, have an extensive service base, which is now becoming more and more powerful and technically sophisticated (exhibition centres, services for rock culture and tourism). Herewith the characteristic features of the recreational environment are: penetration into other types of media, merging with them (rest rooms in hotels and hostels, recreation playgrounds in residential courtyards, avenues and parks in an urban environment, rehabilitation facilities and recreation sites in industrial complexes, physical culture, sports and entertainment establishments in the public sphere, holiday villages, resorts, vacation home as part of the natural formations); active appeal to the forms of recreation associated with the use of cultural values (theatre, amateur performing), historical heritage (tourism, museums), self-education (exhibition centres), sports and athletic performance, which formally belong to human society, but actually contribute to the diversity and usefulness of lifestyle in general [7].

Thus, recreational environment, on the one hand, may be an organic component of residential, public and industrial buildings, complexes and urban formations, and, on the other hand, may have a typological variety with different functional

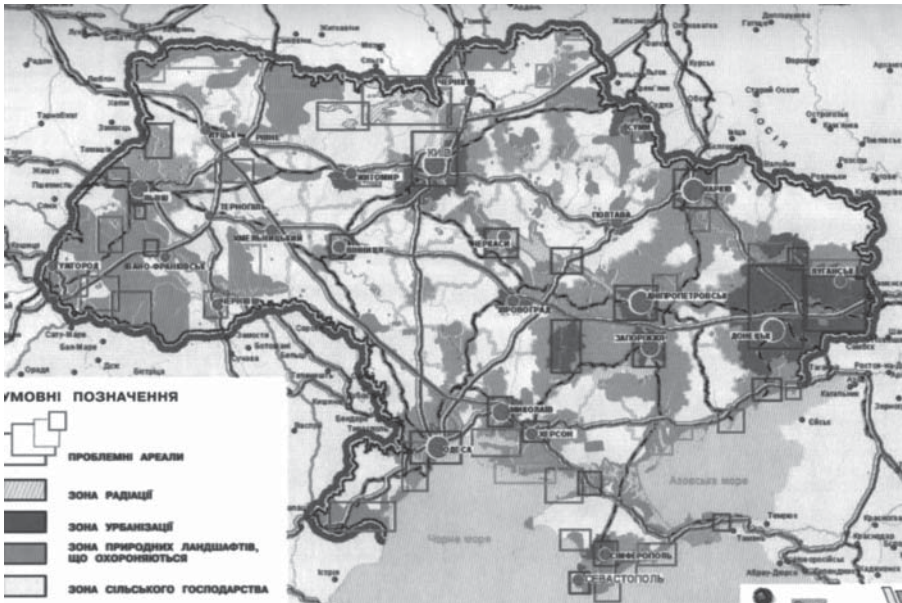
components and various shades of emotional and artistic characteristics – from the noisy atmosphere of mass entertainment and gaming complexes to quiet museum halls and contemplation of natural and artificial reservoirs, contrasting with urban bustle.

Despite the relevance of certain classifications of understanding the architectural qualities and recreational environment and its compositional and spatial organization for the architectural design lies in the plane of open (exterior) space with no cover or roof and indoor (interior) – the room space. It is actually meets the already established distribution of environmental design into external and internal design. These forms of environment differ by the degree of openness to the natural environment, but the same function to be resolved with quite different artistic and compositional means. Hereinafter this typological distribution should be differentiated into the open and closed subsystems respective, also to be divided into smaller-scale elements. Moreover, each element of the system or subsystem should be considered as a complete system a certain level.

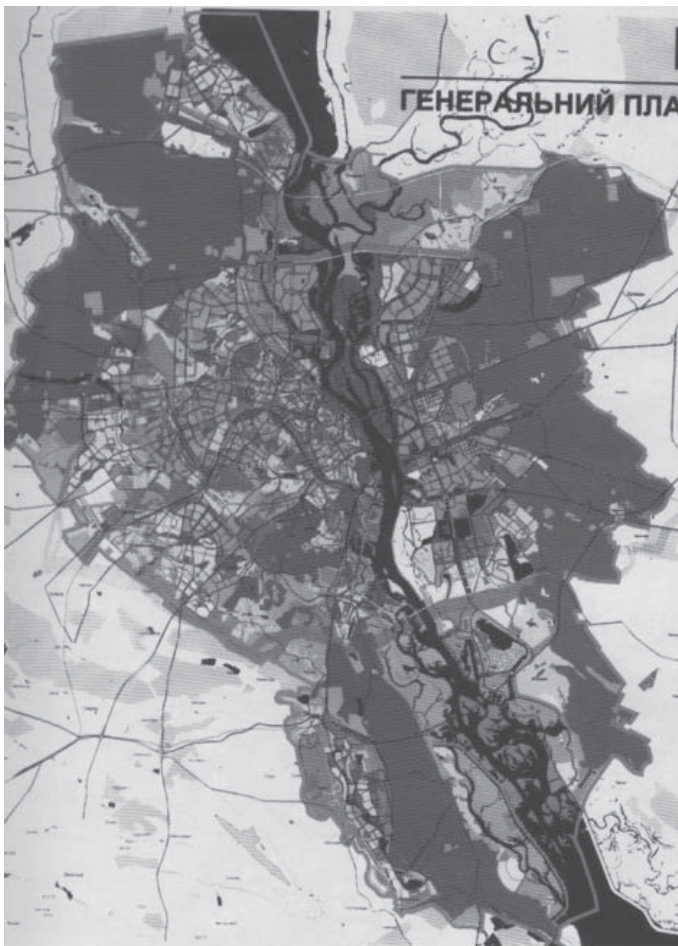
In a system approach, the core of which is to implement the requirements of general theory of systems, the object of research is a set of interrelated elements and components that make up a system, linking the components of the overall objective.

The main statements of the theory of architectural environment systems organization are:

- The system of architectural environment is not the simple sum of the individual elements of building development and landscape fragments, but the single holistic unit;
- As a holistic unit, architecture system has certain boundaries that separate its territory from the external environment;
- Every architecture system (the interior, the building, the area, the city, etc.) consists of number of subsystems, which are also divided into smaller-scale items;
- The stability of system (immutability of its components in its vital activity) is determined by internal regulation, which is implemented through forward and backward linkages;
- Every element of the system can be considered as a complete system of the second level of organization of matter;
- Systems are distributed into the open systems, if they exchange information and energy with the external environment, selectively open systems and closed (locked) systems when this exchange and interaction



il. 1. Open spaces of recreation environment on the level of the general scheme of planning the territory (Ukraine – areas of natural landscapes that are protected are indicated by the green color).



il. 2. Open spaces of recreation environment on the level of the city master plan (areas of recreation environment and natural landscapes are indicated by the green color).

The recreational environment herein is often characterized by the integration of indoor and outdoor spaces, sometimes with a predominance of the role of the second, and mostly natural character as a meaningful aspect of the people's recreation. Therefore, the attraction of components of nature and landscape art to the recreational environment is important – from the greenery planting at the premises of production to the development of attraction and tourist objects in the national parks and other places of "wild" nature [9].

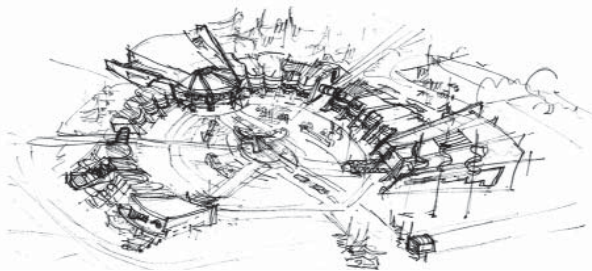
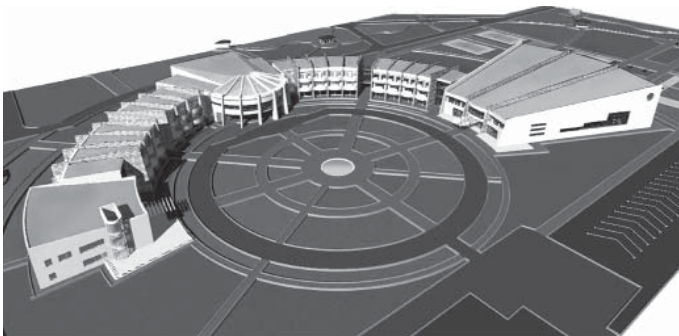
The first hierarchical level of open spaces of architectural systems is the urban development structural unit that defines the place and the role of environmental and recreational facility in the settlement area and its development under various natural and climatic conditions and urban location, characteristics of the surrounding natural and artificial environments.

Urban development conditions of design units' location, together with the natural and geographical factors play a crucial initial role on the formation of both open and closed (interior) spaces of environment. And this hierarchical level has several structural sub levels or subsystems: the first level – general scheme (conception) of settlement of the country and planning of its territory (the concept of territorial development) considering placing the country in the European urban space (il. 1); the second level – regional planning (planning regional territories); the third level – city master plan (il. 2); the fourth level – projects of development of districts, neighbourhoods, urban housing and public entities and ensembles with relevant improvement of streets and squares (il. 3).

does not occur; architectural systems belong to the selectively open for exchange with the environment, due to the human factor [8].



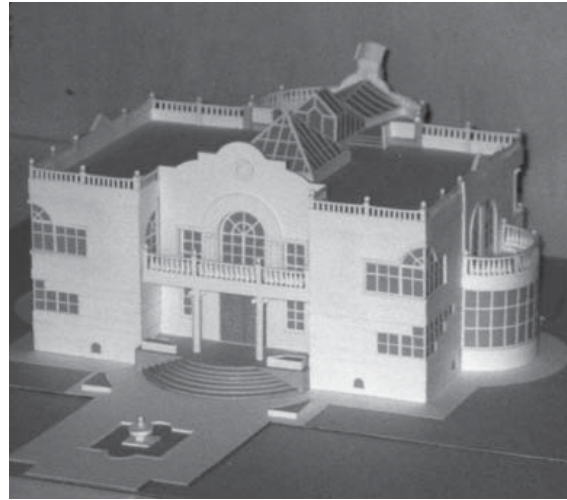
il. 3. Open spaces of recreation environment on the level of the projects of development of districts, neighborhoods, urban housing and public entities and ensembles: a) residential area with recreation spaces in the city of Zhytomyr – architect Vadym Abyzov (in the group of authors); b) public area with recreation spaces in the city of Kyiv – architect Vadym Abyzov (in the group of authors); c) the historic area with recreation spaces adjacent to the National Historic and Cultural Preserve “Kyivo-Pecherska Lavra” – architect Vadym Abyzov (in the group of authors).



Regarding the formation of streets and squares, it is worth to pay attention that especially important this problem becomes in the historic cities of Europe that have a significant historical and cultural heritage and at the same time are the centres of countries, regions and districts with their business and commercial activity. In this case it is important to create a full urban environment by creating pedestrian and recreational zones, taking into account the socio-economic, urban, environmental, engineering, aesthetic and other factors and requirements. Renovation, regeneration, reconstruction and development of the historic part of the city with the creation of aesthetically valuable environment depends on the overall creative idea and concept of development of the central city area, matching its spatial and compositional structure to the design of functional processes and environments and provide the special recreational environment with unique multifaceted sound (il. 3c).

Along with the functions of recreation and cultural and community service, pedestrian zone

il. 4. Open spaces of recreation environment on the level of the individual buildings and structures: a) design of the hotel and entertainment complex in Kiev – architect Vadym Abyzov; b) design of the recreation and entertainment complex in the town of Bovary, Kyiv region – architect Vadym Abyzov.



il. 5. Open spaces of recreation environment on the level of the territorial and spatial fragments, surrounding the buildings: a), b) public buildings in Kyiv – architect Vadym Abyzov; c) residential building – architect Vadym Abyzov.

is a place of cultural events like meetings, town fairs, exhibitions, festivals, theatre and sporting performances, but also for daily meetings and communication between people in shopping malls, restaurants, cafes, etc. At the same time urban environment areas have complex zoning caused by the number of different functions that they formed by. Multi-colouring and polycentrism become an important feature of these objects, that combine transport arteries, various buildings, structures and systems, sometimes planted area, gardens and frequently, in terms of historical development, monuments of cultural heritage [10].

The next level in hierarchy of open recreational space is the environment of individual buildings and structures, subordinate to the appropriate urban development, and the surrounding environment in general (il. 4).

The last structural block is the recreational environment of territorial and spatial fragments, surrounding the buildings, such as a variety of near-ground areas (e.g. relaxing and active recreation), entrance groups, outdoor terraces, exploited roofs, atriums, etc. (il. 5). In this case, this hierarchical level already has the subsystem of separate original structural elements such as specific elements of landscaping and improvement, small architectural forms, visual information facilities, various temporary and mobile devices, etc.

As for the indoor (interior) – room spaces, they should also be divided into the corresponding hierarchical levels of architectural environment.

The first hierarchical level of indoor recreation spaces is to or-

ganize the internal environment of a building or ensemble of buildings, aggregating the complex with unique interior space. The general architectural and spatial plan and ideology of the internal environment of the entire interior space, conditions of its relationship and interaction with the open space architectural environment is determined at this level.

The second hierarchical level of indoor spaces is the specific recreational environment inside the different types of buildings or complexes in relation to other open and closed elements of environment. At this level, as well as at previous, functional zoning, architectural and spatial composition, overall colour solution is determined, not the total inner space of the building but a separate recreation facility (il. 6). The combination in practical design of specialized recreational “mini-spaces” is important here, included into the environment of different purpose, with large recreational complexes, where different forms of recreation from areas of mass entertainment devices to landscape compositions are presented in the necessary proportion.

The third structural unit is compositional and artistic-imaginative solution of key elements and fragments of specific interior space in the context of its overall environmental de-



il. 6. Inner spaces of the specific recreational environment inside the different types of buildings or complexes: a), b) interior of public buildings in Kyiv – architect Vadym Abyzov

sign, such as the design of furniture, equipment, facilities, lighting, etc.

Finally, the last hierarchical level of indoor spaces environment will be the necessary solution for decoration details and synthesis of the arts. The harmonious synthesis of design objects with fine arts and crafts (art pottery, monumental and decorative painting, artistic textiles, sculptures, wooden, metal and glass everyday items, etc.) is an important way of communication and organic interaction of architectural environment.

Conclusion

The typology and structuring provided in this article are important for proper understanding of the phenomenon of recreational architectural environment as a system and can be used more effectively for further research and creation of various concepts, models and multi-level matrix's, as well as for the design and development of urban recreational facilities and objects, that will be useful for both the theory and practice of architecture.

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