The Union of the First and the Second Nature

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Abstract. The importance of the problem under investigation results from the growth of Russia’s towns and cities and related destructive expansion of architecture in urban and natural environmental systems. Unavoidably, there appear a great number of problems caused by haphazard construction, uncontrolled activities of development companies and their aggressive reclamation of suburban territories resulting in crisis phenomena, such as spontaneous trash dumps, oil and water pollution, and green belt destruction. The ways of solving these problems are complicated and costly. The objective of this article is to form a new principle of designing urban and suburban areas where the basis of the project, its chief idea is a fragment of living nature (the first nature) organically implanted in a new architectural context (the second nature). The result of this approach can be a new area where it will be possible not only to combine architecture and nature but also to create conditions for their synchronous development. A way of solving this actual problem of preserving the first nature is to analyze contemporary Russia’s and worldwide experience of designing new residential areas, complexes and architectural clusters. Objectives of combining new technologies. The ideas of the article items can become a foundation for elaborating a method of design for an essentially new urban environment. Primarily, these methods are intended for inspiring young designers’ creative search, forming their artistic and project thinking based on new imagery. The first nature as a source of inspiration and a factor of form creation and style. A new attitude to the living environment as an integral organism will help to create a new living environment, really beautiful and comfortable – one of sustainable development.

1. Introduction

The comfortable urban environment formation problems based on the principles of the ecological culture in the conditions of a big city development are defined by the Government. But new proposals and approaches are concentrated in the largest cities – Moscow and Saint Petersburg. These cities possess facilities and financial means. However, historical buildings and chronic over-population make project solutions specific and orientated to the existing situation. Alongside, the situation in most large cities in Russia is different, and it is possible to apply the approaches, in which the natural landscape is taken into account, to the city systems development. But if not to begin bio-architectural complexes formation immediately, then the industrial landscape will replace the natural one in the nearest future. The problem is obvious – fast disappearance and destruction of natural systems and elements, caused by active expansion of the urban and suburban infrastructure.
2. Actuality
The condition of the urban environment of the majority of Russia’s large cities is near the deadline. The “toxic” space that has often been formed spontaneously, gives rise to a wide range of problems: social tension, traffic difficulties, green belt – the “lungs” of the city – disappearance, media and communication mess, visual trash, and noise. Proposals to create green zones have no response (high price of unoccupied urban grounds); attempts of point planting in residential areas are so ineffective that no one takes them seriously, and they gradually come to an end.

The situation concerning the creation of comfortable living environment in cities is under discussion at all levels for a long time. Concepts are proposed by sociologists, architects, designers, psychologists, and IT specialists.

To determine the basic principles of harmonic urban environment is not a simple matter. To do this, it is necessary to reveal the factors that are regarded by most city residents as comfortable. The list of these factors will be very long because it is related to each resident’s demands for convenient infrastructure. In addition, there will be a large number of general notions about necessary city systems or factors influencing comfortable environment of the contemporary city space. A poetic image of a “garden town” is exciting one’s fantasy up to now, and for many of us it is an ideal of a town of future. The given article concerns the problem of interrelations between the existing environmental systems and the offensive movement of the urban construction. The necessity to turn to the problem of cardinally new attitude towards the urban environment formation has come to a crisis point. Long ago, this topic became the subject of wide discussion by city residents, architects, builders, and city administrations. At every level, they adopt decisions, and up-to-date architectural proposals are put forward; but the situation does not seem to be changing.

3. Discussions
Discussions about the large city development and creation of the comfortable living environment mainly concern new principles of designing green zones in the new building work infrastructure. Sometimes, modern park zone large-scale projects like the Moscow “Zaryadye” are proposed. Ideas of the creation of architectural complexes within natural environment where nature is supposed to be preserved and developed appear very rarely.

The theme of this article is not new but it is undoubtedly vital. Discussions were conducted at all scientific levels in our country. A detailed investigation was made by the creative group of Yu.P. Lebedev [10]. New architectural principles based on natural laws, complicated ecological systems, and flexible structures were implemented in many scientific works and project designs. The general interest in the new principles of the environment arrangement was focused in the proceedings of the first international festival of innovative technologies in architecture “Green Project 2010”. The aim of this large-scale forum was to unite the most active creative forces, newest achievements of architectural thought, and advanced technologies in eco-architecture. The manifesto uniting bright architects and designers of Europe and Russia, was worded in the appeal of President of the Union of Architects of Russia Andrei Bokov, “The notions “green architecture” and “green urbanism” comprise a combination of applicative knowledge, rules, skills, and technologies that are based on a certain worldview, more humane, more tolerant, more inclined to search for compromises...”[16]

Without elaborating concepts of a new type urban environment where the First nature and the Second nature can constitute a unity, be equal and develop synchronously, it is impossible to solve the problems of so grand a scale as modernization of Russia’s cities.

It will be impossible to solve problems of so large a scale without a new type of thinking. It is now necessary to replace the old lifeless term “planting greenery” with a new one – “eco-philosophy”. The essence of the new thinking is obvious. If harmony, perfection, and stability of natural environmental systems and ecosystems, which have survived in their original form, are accepted as an ideal, it becomes easy to determine the target of designing and forming new infrastructures, integrated or “grown” in natural conditions of particular territories. Fortunately, there are many such natural virginal areas in Russia. This idea is well confirmed by a historical experience even in places where
the problem of preserving historical buildings makes the creation of eco-environment hardly realizable. One of bright examples is contemporary Berlin where it often seems that green plants force out the city and not vice versa. It is particular this natural environment full of colors and life that gives a feeling of comfort and modernity, and makes the image of the city rememberable. The First nature does not frame architectural complexes; it dominates here [1-21].

The example of one of the largest European centers clearly demonstrates the thesis that the destructive expansion of civilization must give way to a respectful and cautious scenario of co-existence and development of the community and the nature.

The destructive expansion of civilization must be replaced with a responsible and careful scenario of the co-existence and co-development of the community and the nature.

Projects that imply “sterilization” and then “reclamation”, and poor attempts of “improvement” of a would-be construction ground as a fundamental principle, though slowly, but still, give way to newer projects, in which the development of an idea is correlated with the particular landscape situation. The existing environmental conditions (living nature) define the character of architecture and become the most significant part of the conception for further designing necessary infrastructure.

A global project of a new type living environment and stable development territory creation in its ideal implementation is a synchronous development of the two complementary systems: the natural complex and the architectural ensemble, i.e. the first nature and the second nature.

One can hardly imagine more convenient conditions for such a space formation than Russia’s territories and natural resources.

In order to implement actual ideas of the bio-architecture in the nearest future, it is necessary to form the new type consciousness and thinking, to ensure the existence and development of the society of high intellectual responsibility, where the development of the latter is defined not by civilization principles but cultural ones. It is necessary to form everyday life culture, i.e. consumption, communicative technologies, morals and manners, eco-culture, due attitude to household wastes. It is necessary to acquire notions of culture proper: education, active interaction of industrial branches and technologies, encouraging of each human’s creative activities, mass sports, and leisure. The same should be referred to the professional culture: encouraging of all kinds and genres of arts, formation of new spirituality and aesthetic ideals, involving of all active layers of society in preservation and development of cultural heritage and historical monuments. The ecological thinking should be formed by the efforts of the whole society of today’s Russia. If a human from the very childhood has an opportunity to observe plants and trees, arrange his or her own piece of nature in the courtyard, decorate and rearrange it as he or she likes, and do this on his or her own will, then that human’s attitude to the life and activities will be constructive and humane.

At present, there exist technologies that allow to involve wide public in open discussion and to achieve the interaction of all systems. It should be done in order to move nearer to solution of the problem of the country modernization and creation of real organic and up-to-date living environment.

4. Results
The teamwork on arranging a “living garden” or “house land wood”, one can call it as he or she likes, can become a creative project for the tenants to spend time with pleasure. Anyone will find a job, including the tenants having specific needs. The inspiring influence of such an environment will lengthen an active life of everybody, who will take part in creation of this up-to-date harmonic biosystem. While elaborating a concept of comfortable urban environment, the main objectives of designing are a search for new imagery and an attempt to go beyond the habitual townscape. The design projects based on the principles of synchronous development of the first and the second nature can become a foundation for newest eco-systems with closed cycles and renewable energy sources.

The Chair of Design and Art History of the Ufa State Petroleum Technological University conducted a large-scale scientific research on the elaboration of concepts of a new type urban and suburban environment development; the research resulted in the projects “Green Beam”, “Museum of Forest”, “Six Hundred Square Meters” and others. These projects make use of a historical device of a
pattern composition of an oriental carpet. The literal meaning of this carpet composition is the “Garden of Eden”. It is characterized by the clearly distinguished center, delicate framing, expressive details, and a very rich color scale. The composition inspired the creative team to search for an unusual design of inner decoration of urban districts. The visualization of new imagery systems in the models that were made while working at the projects, showed a wide range of means for designing comfortable, ecofriendly, and aesthetically perfect residential clusters, based on the principles of combining architecture and natural complexes. Nevertheless, the main result is the energy of thinking of young designers taking part in the projects. Their being captivated by the ideas of the bio-architecture and eco-architecture has formed their creative conviction, which will allow them to turn the visualized dream into a new reality, where the First Nature will be a source of inspiration for the Second Nature.

The elaborated concepts put forward a design of urban clusters, implemented in models. The basis of the proposals was an investigation of several typical landscapes in central regions of Russia and the Republic of Bashkortostan. The new type urban environment idea was formulated on the basis of the natural systems and contemporary architectural solutions, optimal for each of the typical landscapes.

The project of “living garden”, capable of synchronous development and “growth” where the above described methods are supposed to be used, must become a manifesto of a new ecofriendly way of life and of new aesthetics of the city – the city for a comfortable social life.

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