Contemporary Urban Space in the Context of Formal Currents of Architecture

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Abstract. In architecture, synthesis of art forms more often is considered in a restricted context, when coexistence of different art forms is investigated in a certain object. But notional limits are actually wider and have become very conditional, reaching deeper layers of fields of competence among different architecture specializations. The article on the basis of examples provides a detailed research of various urban engineering methods in context of synthesis of art forms.

Keywords: architecture of 21st century, architecture history, synthesis of arts.

One of the most important factors, which since hoary antiquity till nowadays have determined the quality of artistic expression of the man-created environment, is the synthesis of various types of visual art and architecture. It has manifested itself in environment of all kinds and scales – from interior rooms up to large-scale urban milieu. Architecture (the word originates from Ancient Greek ὄρχι [arhi] – main – and τέκτων [tektōn] – builders [1]) is the art of environment formation. It organises the space in which the life of human beings take place. Architecture is also a compromise between the man-created space and natural environment. Thus, as the attitude and requirements of the society towards architecture are changing, architecture on the whole changes. New technologies and 3D-designing at present opens up unprecedented opportunities, which are vividly marked in the works by the 21st century architects – architecture evolves as an art, in its expressions using various ways of form creation.

In the 21st century architecture an unconditional liberalism has emerged. In the liberal ideology the individual and his freedom are more important than the interests of any group or team [2].

The architecture object is quite frequently formed as a sculptural art work. This trend has been named Art Architecture [3]. The dominant instrument in the architect’s work instead of empirical proof or theories is creativity as the main driving force.

The modern man spends 90% of time in an artificially created environment [4], thus the architect must assume a full responsibility for the environment designed by him. It must comply not only with aesthetic, but also functional requirements. Experiments in the field of synthesis of arts have become the main driving force due to the growing desire of the society for a new, qualitative, artistic and also sustainable architecture.

Also, synthesis of arts is a novel instrument for promotion of competition among architects, since qualitative design proposals, which strive to tear down borders between different kinds of art, can be competitive as the demand in the general public grows for a particularly qualitative urban environment. Nowadays neither architecture nor fine arts can be considered “pure and singular, they both have become an inseparable pair, indistinct, interdisciplinary, subjective, but also regional and individual” [5, 9]. This cultural symbiosis must inevitably implement “the global village world” [5, 9], during which the contact between different disciplines thanks to the opportunities of digital communications and mobility will enter into a new development phase.

I. Synthesis of Architecture and Fine Arts in Urban Space Viewed Historically

In 1960 a futuristic group of architects Archigram [6] started to promote the idea of the spatial object as a work of art of installation type, which exists in dialogue with the urban environment. These formations, like movable, temporary collapsible festivity-oriented theatre stages, were designated both for a short-time and longer use. In such a way “the architecture for art’s sake” arose. At the same time architecture has always been the mirror of art and inseparable from it at least till the Renaissance in Europe [5, 11]. The borderline between art and architecture never has been drawn with finality.

A real renaissance in synthesis of arts starts in the 50s and the 60s of the 20th century simultaneously with spread of the sculptural architecture. This trend emerged in France in 1950, when the architect Andre Bloc modelled a form, putting into shape a “habitable sculpture” [5, 16, 21–30]. The object is implemented only at the maquette stage (Figure 1).

Fig. 1. “6 sculptures” Maquette. Meudon, France, 1960–1964. Andre Bloc. [5, 29]
On the urban construction scale, Guy Ernst Debord and the Situationist Movement determined the environment and context as the priority, thus creating a new method of city researching – drift, fluidity or motion. It evaluated the fourth dimension of architecture – shifting of people from one point to another, performing the mapping or developing relevant cartograms of motion. The Situationist Movement (from Italian Situazionismo), which emerged in Western Europe in 1957, comprised radically-minded Marxist artists and intellectuals and was close to anarchism according to its ideas. This movement was formed by Guy Debord with sympathisers – leftist radical artists and writers, who gathered around the French radical publication Internationale Lettrist [7].

At that time, A. Bloc also formed the architecture magazine L'Architecture d'aujourd'hui, in which the most recent discoveries in architecture were summarised. Many innovative solutions in the field of synthesis of arts arose, especially in designing of plastic forms and performing experiments with synthetic materials (Figure 2).

With the rise of a sculptural and transferable or mobile architecture [5, 21], the idea about the immutability and stability of the city structure was altered: people could transfer their domicile from one place to another; the city became mobile and changeable. Such transformable architecture turned into a metaphor for the man’s freedom both socially and politically. The Austrian architects’ groups Coop Himmelb(l)au and Haus-Rucker–Co carried out designing according to this philosophy. Along with these ideas, a more rapid development and changes started to take place. The essence of architecture as such began to change since it has become more interactive in relations with the surrounding environment. With the increase of the role of synthesis of arts and development of technologies, as a relation to the style of Functionalism or the Modern Movement [5, 26], there arose models of drifting, flowing or mobile cities, organic cities, inflatable cities (Figure 3), special cities (Figure 4), skew or oblique cities and other ideas of cities, which is the basis for the 21st century integrated city planning or fluid urbanism.

The ideas of mobility, motion and fluidity can be found already in the sixties of the 20th century. They, by the way, are mentioned in the essay “Fluidity” by Claude Parent [5, 111].

At the end of the 1960s, revolutionary student groupings Archizoom, Superstudio and UFO created the movement of “Radical Architecture” in Florence. Its representatives started to combine architecture with other forms of art, in such a way, architecture became action. This altered the language of architecture, particularly the expression of forms and type of designing. In the mid 70s, the Dutch architect Rem Koolhaas, under the influence of the radical Italian architects, composed the treatise Delirious New York illustrated with architectural sketches of the author. R. Koolhaas believed that “the big city is an expanded archipelago for isolated individualism, revealing itself in various kinds of islets in separate New York districts” [5, 131]. The city planning network, as if contained “unconscious” environment, is indifferent towards the elements that compose it, and therefore is insensitive to any city-planning events [ibid.].

In the 1970s, the urban environment issues became “an amusement attraction” for many artists, who balanced on the boundary between landscape designing and conceptual architecture. In the late 1980s, there was development of Deconstructivism. It was formed in parallel to psychology and literature based on the ideas of de-construction by the French philosopher Jacques Derida. Architecture acquired a new language.
Art was reflected in architecture and urban planning. Visual art expands its definition and expression means to comprise almost “anything”, including a new vision of architecture and urban environment. “Public art has become very extensive, and in recent years it has a significant role in development projects of large cities in the entire East Asia – Japan, Korea, Taiwan, and China. It begins a new relationship with the structure of cities” [5, 10]. Nowadays, art extends its horizon and territory rapidly. Creativity and artistic approach encourage emergence of new architectural objects and urban development methods, promoting higher requirements for the architectonic space and for shaping a better urban space. Such an example is “Place of Reversible Destiny – Yoro Park” made by Shusaku Arakawa, which was opened in 1995 in Japan, in the Gifu prefecture. In this design the desire to visually tear down the gravitation borders is vividly manifested by changing the relief and using expressive sculptural forms. But despite this, in the park one feels in harmony. The objective that the artist wanted to achieve was by various stimuli of psychological perception to alter the view on daily life, as well as the sense of equilibrium. This work (Figures 5 and 6) is an example “how to turn architecture and even whole cities into art.” [5, 11].

II. PRINCIPLES OF FORMATION OF URBAN SPACE IN THE 21ST CENTURY IN THE CONTEXT OF SYNTHESIS OF ARTS

The principles of formation of urban space that have originated in the 1960s are the basis for methods of modelling the modern environment, which, thanks to the digitalisation opportunities created in the 21st century, are finally implemented in urban planning, too. Brilliant theoreticians who have worked in this sphere are professor Marcel Smets as well as landscape architect and theoretician James Corner, who have analysed the contemporary urban environment, urban planning and visual culture. Principal idea of J. Corner is to emphasise the subjective moment, the-yet-unnoticed in the alternative methods defined by him [10]. Methods of urban planning summarised by him are formed on basis of new principles of mapping that can be divided into four different principles of study and formation of the existing urban environment. These principles are as follows:

1) Drift. It is based on the analysis of the existing environment, studying it as a flowing psycho-emotional intuitive path that has formed as a self-regulatory system. First attempts to research such paths were made in Paris. It was done by the Situationist Movement (followers of Dadaism ideas) already in the 1950s and 1960s. They experimented while freely walking along the streets of Paris and in choice of the route following only their emotional impulses. Then these routes were marked on the city map, by entering the entirely new information related to the daily life of the city. Based on such and similar experiences, one can perform a reverse mapping, for example, by programming into the new city layouts mental maps, which envisage novel, psycho-emotionally effective trajectories for perception of the urban environment (Figures 7 and 8). This approach arose as a protest to the “ordinary” system of mapping [10, 232].
II. EXPERIMENTS OF FORMATION OF URBAN SPACE IN THE 21ST CENTURY

In our century, the possibilities of up-to-date technologies are used by many designers. Among others, the Dutch NOX, world-famous Zaha Hadid born in Iraq, creative group BIG based in Copenhagen etc. stand out by their impressive contribution.

NOX is an art and architecture office in Rotterdam, which since the beginning of the 1990s under the leadership of professor Lars Spuybroek has researched relationship between architecture and other fields – art in the broadest meaning of the word, mass media and computer equipment. Research of interaction between architecture and computer equipment and practical interpretation is one of the ideological priorities of this office. Formula of creative activity of NOX is synthesis of various kinds of art targeted at producing of “Architecture of Art”. It is vividly manifested in “The Pavilion” (H.Oexpo) designed by NOX [14], which must be seen almost a reading-book type example of cyber architecture [15]. This object is a NOX research project, which has become a symbol for the amorphous or changeable, or “liquid” architecture, as it has been called by one of the most famous researchers of computerised architecture in the world, the American Marcos Novak, who is regarded to be the pioneer of architecture virtuality [16; 17 - 150]. In the “Water Pavilion” the walls, ceiling, and floor merge into a unified whole – “architectonic body” [16], which in perception seemingly expands and absorbs the surrounding environment. NOX architecture has become a platform for active space organising.

One of the most interesting works by NOX in the sphere of city research and planning is the project “Paris Brain”. It is the study of the western part of La Defense territory and vision of spatial proposal made especially for the exhibition “Experiences of Urban Planning”, Institute of the Netherlands in 2001.

The project concept is linked to a series of social processes important at that time and at present, too – migration and trans-nationalism – as well as to the ideas developed in the 1950s. These are methods of “action painting” and psycho-geographical mapping, which seemed interesting for the creative team just because of the graphical end-result. As the basis for designing process, the woollen thread method created by Frei Paul Otto was selected; however, it was modified and perfected by NOX. If F. Otto used the thread as a structural element only in two-dimensional interpretation, then NOX allowed woollen threads to flow freely also in the third dimension (Figures 10 and 11). In fact, the essence of the method is to include both rational and irrational information into a united system, leaving the
non-logical component to fortuity. Thus, through experimentation new gravity centres for urban construction were searched for. A maquette was made in which woollen threads served as information cells. After repeated immersion of the maquette into water so that threads would freely arrange themselves on its surface, content was given to each thread formation [18, 248-249]. Later on the information read from the maquette was processed by a computer to produce three-dimensional urban construction models – scenarios. In such a way in the maquette, motor road routes were obtained, in some places thread entanglements were interpreted as large tubular buildings, but elsewhere – as shopping malls or airports. As a result, a vision of landscape-like and sculptural city environment has emerged. This method was not restricted only to formal experiments. Population migration and sociological parameters were also analysed, especially focusing on the language and dialects [18].

NOX office is the “guru” of cyber architecture. “Computer is something more than any other steering device. According to the old rule in cybernetics, it simply means two things, direction and flexibility...” [18]. Nonetheless, the office philosophy also envisages an individual design, which would be a self-evident and easily accessible value for the customer. This is also applicable to the urban environment, in which NOX sees inexhaustible potential for coexistence of art works and architecture.

Works by Zaha Hadid are balancing on the verge between sculpturality and pictorality. It is logical that many of them have not been executed. The architect considers herself an abstractionist. In architectural sketches of Z. Hadid, pictorial impulses are interwoven with architectonic motives. The space designed by the architect is in contrast to the classical architecture. Her proposal for development of the Bagnoli Park area in Naples, Italy vividly illustrates her methods of designing, which are projected into a large-scale landscape environment. Dynamically bent lines enclose squares of plastic form, which in some places are envisaged as vegetation cover, but sometimes are transformed into an architectonically spatial formation. It is like a colourful three-dimensional painting rich in forms and textures. In the large-scale project (Figure 12 and 13), the striving for sustainable environment as well as interaction of public spaces and nature are encoded [19].

Z. Hadid has also modelled the City of Exhibitions and Conferences in Cairo, Expo City as a huge sculpture [20]. It is a complex of exhibition, business facilities and hotels, where every compositional element is subordinated as a separate unit according to a single idea.
Two other minute plans developed by Z. Hadid stand out with their big amplitude and ambitiousness. One of them is the territory development vision [21] for the new Excellence and Car Adventures Centre in Sakhir, in the Kingdom of Bahrain. Volumes produced by curved lines in the view from above and in various spatial perception angles remind of motives encountered in nature. In the minute planning of Kartal Pendic territory in Istanbul, Turkey, as the instrument of designing, a special method was used, which was based on the generating of urban construction scenarios with preconceived algorithms that were derived from various parametrical data. A model has been created where in some places high buildings are towering towards the sky, elsewhere the city is covered by a denser street grid, but in other places a more open urban space is formed. Although digital technology possibilities are used in designing, the contribution by the architect into solving the complicated designing problems remains irreplaceable. [22].

The creative group BIG comprises architects, designers, and builders. This team (Bjarke Ingels, Andreas Klok Pedersen, Kai-Uwe Bergmann et.al.) in a targeted manner work in several directions – in architecture and urban planning, as well as in the research sphere. At present, the office is involved in the elaboration process of several large, publicly significant projects in Scandinavia, Europe, Asia and Near East. One of the characteristic creative features of BIG, in their own opinion, is a pragmatically utopian architecture, which is formed with the aim to avoid “tiresome boxes”. The social economic and ecological considerations are strictly introduced into the dialectics of form. Basis of the office philosophy is the drive to relocate the accents from trifles to big things, striving in an ambitious manner to transfer the entire planet, emphasising the creative freedom of each architect as a significant precondition for achieving goals [23]. A typical example of BIG creative activity is the territory development proposal The Battery in Copenhagen, Denmark (Figure 14). It is a vision of large-scale spatial structure. In The Battery, the most diverse functions are envisaged, starting with apartments, offices, hotels, culture and sports facilities and ending with a mosque, which would be the first construction of such type in Denmark. It creates an associative link with the motives of hills and valleys. The Battery project embodies the vision of a modern multicultural metropolis, which Copenhagen strives to become.

Interpretation of nature’s motives in architectonically artistic execution of BIG office is also “The Seven Peaks of Azerbaijan”. This is a proposal for spa-resort project on Zira Island in the Caspian Sea (Figure 15).

The majestic volumes of buildings symbolise mountains of Azerbaijan and are conceived as continuation of the natural environment and relief of the island. They cover the entire territory, removing the borders between the man-made and natural worlds. Each of the newly-created “peaks” is a complicated spa-resort system. In order to maintain it, a minimum consumption of energy is planned, using heat pumps, solar batteries and wind generators.

CONCLUSIONS

The city environment is transforming and changing with the times. It has been both in the recent and more distant past, but there are positions that remain unchanged. One of them is the interaction between society and architecture. If the society aspires to a high-quality urban environment, architecture satisfies this demand. Not infrequently in the societies that are still in the stage of stagnation, just the opposite can be observed. Architecture and, consequently, the development of urban space go hand in hand with the requirements of man as an individual towards his space of life.

One of the most important cornerstones of formation of the city environment is methodology of designing, understanding by it the set of creative methods ensuring the implementation of the final result. The second one is implementation of the design. It has a direct, immediate impact on the urban environment. Outer space of the city is a place where a man can feel the informative field emanated by architecture and various art objects. If in the designing phase the interdisciplinary impact quite often has a theoretical character, then in the actual urban environment synthesis of arts can be observed in a considerably more explicit manner.

In the middle of the 20th century, the use of non-traditional methods in urban planning started. At that time several innovative formulas have emerged, which can be regarded...
as conditional “recipes” for designing. An explicit trend was the aspiration to mix information of different character, thus generating more diverse schemes and diagrams, the application of which became an inseparable part of designing process. Nowadays, variations, transformations and adaptations of these methods are also used quite frequently, involving into the process the inexhaustible resources of computerised technologies. Diversity of such quests rather often becomes the end in itself for many architects.

If formerly several ideas of city construction were considered only as utopian experiments, then at present digital technologies of design and manufacturing guarantee the execution of seemingly unreal ideas. In fact, the future urban environment cannot be imagined without many-sided involvement of different technologies. This is proven by innumerable design proposals, which have won a wider resonance in the turnover of global architecture.

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Mūsdienu pilsetēltpa arhitektūras formālo strāvojumu kontekstā

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1. Arhitektūras un tēlotājmākslu sintēze pilsētēltpa vēsturiskā skatījumā


Mūsu gadsimtā moderno datortehnoloģiju iespējas izmanto daudzi projektētāji. Citi vēl aizspiedīgi veidojumus izcauzē holandiešu NOX, pasaulēzīņa, Irākā dzīmītā Zaha Hadida (Zaha Hadid), radošā grupa BIG, kas bāzējas Kopenhāgenā u.c.


Zahas Hadidas darbi balansē uz skulptūrātās un gleznieceskuma robežas. Likumsakarīgi, ka daudzi no tiem tā arī nav tikai realitātē. Arhitektie sevi uzskata par abstrakcijā un pilsētā ierīce. Saskaņā ar veco noteikumu kibernētikā, tas vienkārši nozīmē divas lietas, virzienu un elastību...”[18].

NOX bijoši ir kiberarhitektūras "guru". "Dators ir vairāk nekā jebkura cita stūres ierīce. Saskaņā ar veico noteikumu kibernētikā, tas vienkārši nozīmē divas lietas, virzienu un elastību...”[18].

Bīrža filozofija tomēr paredz arī individuālu dizainu, kas būtu pasākumām pasāpota par vēlgi sasniedzama vērtība. Tas attiecināms arī uz pilsetvīdi, kurā NOX sakārtas neizšķērsošu potenciālu mākslas darbu un arhitektūras koexistencei.

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BIG apvieno arhitektu, dizainerus, kā arī būvniekus. Šis kolektīvs (Bjarke Ingels, Andreas Klok Pedersen, Kai-Uwe Bergmann u.c.) mērķtiecīgi strādā vairākos virzienos – gan individuālos, gan kolēktīvās veidojumos. Šīs veidojumās mērķis ir abstrakcijas veidojums un attīstības centrālā vieta mūsdienu mākslā un arhitektūrā. Bīrža filozofija tomēr paredz arī individuālu dizainu, kas būtu pasākumām pasāpota par vēlgi sasniedzama vērtība. Tas attiecināms arī uz pilsetvīdi, kurā NOX sakārtas neizšķērsošu potenciālu mākslas darbu un arhitektūras koexistencei.

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liešam (angliski big) lietām, ambiciozi vēlotes pārveidot visu planētu, akcentējot katru arhitektu radošo brīvību kā svarīgu priekšnosaicījumu mērķu ēšenošanai [23].


Dābas motivu interpretācija BIG biroja arhitektoniski māksliniecieka izpildījumā ir arī „Azerbaidžānas septiņas visrošnes”. Tas ir kūrorta projekta priekšpārskats, Zira salā Kaspijas māksliniecībā ir arī „Azerbaidžānas septiņas visrošnes”. Tas ir liela mērogu telpiskās struktūras vīzija.

Pētījumā piekļuvis sapratnes par dažādām struktūrām vīzijā, kas ir asociētas ar telpu manifestēšanu. Mērķis ir uzlabot telpu manifestēšanu, kā arī pazīstamību par telpu manifestēšanu jutīgām iespējamām un reālām attīstības avotām. Tādēļ ir būtisks iecerēt plašus un kompleksus modelis, kas atbilst dažādām vērtībām un prasībām.

Šo attēlu informāciju ilustrē starpdiapogrāfija, kas ir pievienota šīs raksta avotām. Tā kā attēla informācija nav piesātināta, tā tiek pievienota šai raksta avotām. Tā kā attēla informācija nav piesātināta, tā tiek pievienota šai raksta avotām.


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