New forms of synthesis in architectural and landscape design

O V Davydova
Department "Architecture", ASI, South Ural State University, 76, Lenin Prospekt, Chelyabinsk 454080, Russia

E-mail: dav-ow@imail.ru

Abstract. The current trends in the organization of landscape spaces as interior for the information society, using the multiple synthesis of the arts in the emotional “revitalization”, are considered. Repeated synthesis of the arts, close to synesthesia, syncretism and integration in the interaction with technology in new (other) combinations and scales. These are: the scenario of relations with the world, the route of action, the rules and sequence of the game, the system of connections between objects, the level of complexity of the interaction process, the emergence of emotions (from solving a multivariate task). There is a lot of variability of solutions in the saturation of the multifunctionality of design elements, the means of synthesis, affirming the universal human values of love, health, creativity and wealth. The concepts of positive impressions are analyzed, patterns of the structure of essence and sensation are considered. Justified replicability as a pattern of understandable and accepted by the society model of activity on historical examples. The features of landscape design as a synthetic art form, focused on the optimization of human life, taking into account anthropological, psychophysiological, ecological, aesthetic factors. Keywords: information society and space, multiple synthesis, synesthesia, syncretism and integration, landscape as interior space, methodology

1. Modern trends in the organization of public spaces

The property of all living organisms is not only to transmit information, but also to transform it and transform it. The same happens with man. The new information space forms a person and opens up new possibilities for organizing architectural and landscape spaces. Waves of breakthroughs are expected in various fields: from the interpretation of information, which is recorded in human genes and nanotechnology, to renewable energy sources and quantum calculations. This will have a systemic impact on humanity and can change not only the “what” and “how” we do, but also the “who” we are. The model of organization of public spaces has changed. The areas created for people to communicate are often occupied by cars. Robots are increasingly freeing man from work. Architecture, transforming the life of people with sleep (sleeping areas, tombs), strive for the awakening of people to an active (immortal) life. With the advent of typography, architectural semantics disappeared, a synthesis appeared that is used to enhance the emotional impact [1-5].

Modern authors strive to leave their mark on the architectural and landscape design, they want to find and express in the general and necessary a special, “private” opinion about the structure of the universe with the ability to be realized by citizens in various activities: producing emotions in the process of commodity, entertainment and status consumption, producing thoughts and impressions as
a result of the exchange and consumption of cultural and intellectual products, maintaining health, implementation in work, communication, etc.

The study is devoted to the study of new (other) forms of synthesis of architectural - landscape design for the emergence of positive emotions among public consumers and the desire to repeatedly visit public space.

2. Synthesis of arts in architectural landscape design
The synthesis of art (heatch. Synthesis - connection) - the connection of several different types of art into an artistic whole. In this case, it is not a mechanical connection that is meant, but the creation of a qualitatively new artistic phenomenon. Architecture and monumental art are constantly striving for synthesis. As a result of the interaction of architecture, monumental and arts and crafts, an artistically created everyday environment is born.

Synthesis of art should not be confused with the close concept of synthetic art forms. Synthetic art - these are the types of artistic creativity that represent an organic fusion or a relatively free combination of different types of art, forming a qualitatively new and coherent aesthetic whole. A striking example of synthetic art forms is landscape art - the art of creating landscape gardening compositions using natural and artificial elements or landscape design.

Integration is close to the concept of synthesis - synesthesia (the mutual influence of the senses), syncretism. By syncretism in anthropology and ethnography meant the indissoluble unity of all arts in the artistic action of ancient peoples, as well as a certain level of development of artistic culture, for example, in peasant art and rituals, where dance, song, dramatic construction, slander, imitation of labor gestures mimic actions are difficult to separate from each other in a single holiday or magical ritual.

The synthesis of technologies and their interaction in the physical, digital and biological fields is of fundamental importance for modern design processes ... The emergence of new forms of synthesis in art on the basis of new technologies, predicted in his model "Periodic system of arts" Bulat Galiev [5]. However, the emergence of new forms does not destroy the presence and development of traditional forms of synthesis. Creativity multiplies the artistic riches of humanity, and the creative process is both the introduction of chaos into the old system and the birth of a new system from this chaos[6-8].

The study of synthetic forms of architectural and landscape organization in a historical aspect, many researchers have dedicated their works [9-14].

A new sphere appeared in the activity of phytoergonomics (from the Greek “fiton” - a plant, “ergon” - work, “nomos” - the law). Phytoergonomics is a new promising direction of modern science and practice that has arisen at the intersection of the sciences: biology, medicine, ergonomics, psychology, design, landscape design. Synthesizing the achievements of these sciences, phytoergonomics solves practical problems of optimizing human labor activity taking into account the whole complex of influencing factors (anthropological, psychophysiological, ecological, aesthetic, etc.). In the process of the historical development of landscape art, various compositional techniques for organizing park spaces were developed [15,16].

The main criteria for the formation of the composition of landscape objects are revealed. These are: artistic expressiveness, compositional integrity and stylistic unity, expressed in the scale of space and its elements, the use of contrast, nuance, meter, rhythm, proportioning, the general ideological and artistic concept, the tectonics of the design elements, the unity of the materials used, the identification of the compositional center of the main and secondary axes and accents, layout style, identifying the compositional center, main and secondary axes and accents [17-19].

The mechanisms of perception and understanding of information in the mass consciousness are determined [8,20,21].

A.V. Kurpatov [4] compiled fact card "Art", the rules of interaction between consumers and works of art:
1. The scenario of relations with the world
2. Action Route
3. The sequence of the game
4. System of connections of objects
5. The level of complexity of the interaction process
6. The emergence of emotions (from solving the problem)
7. Relationship Rules

Consider these rules in modern forms of architectural and landscape design for new (other) functional processes. The main thing in the composition of the functional process, its organization in time and space, which excludes (if possible) the negative impact of the function on the state of the person consuming the environment, will enhance the positive traits of impressions.

3. Concepts of positive impressions by means of synthesis

Art is a potentially complex object from the set of interrelationships of structural components: drama of processes with a multitude of scenery, the semantic vector as a desire to realize and accept life values, emotions of consciousness and solving puzzles of symbolic, historical, spatial and other visualizations and installations...

In the history of architectural and landscape art there are many examples of semantic concepts that affirm the universal human values of love, health, creativity and wealth. A striking example of the wonders of the Ancient World, are the hanging gardens of Babylon in Babylon, created for the beloved wife of King Nebuchadnezzar, born in the highlands. The artificial mountain on stone pillars with beautiful trees and flowers planted on its ledges was admirable. This fabulous oasis in the desert has become a symbol of love for many centuries.

This method of gardening in modified forms has reached our days in the form of roof gardens.

The objects of architectural landscape design can be phyto-composition and flora composition. Phyto-compositions are created only from natural plants, have a sanitizing effect on the environment and a certain decorative effect. Flora composition can be created from natural plants (it can be dried flowers), and artificial. They have only an emotional impact on a person.

Plants with medicinal properties have been used since medieval times in pharmaceutical (medicinal) orchards and vegetable gardens with the cultivation of fruit crops and grapes, medicinal flowers. Christian symbol of the purification of the soul through labor in the Garden of Eden.

This method of gardening in modified forms has reached our days in the form of roof gardens.

The spatial compositional principle of the labyrinth invented in the Middle Ages in conjunction with the visual arts formed paintings - labyrinths. Plants are planted on a special technology on specially marked places. They benefit not only as components of the labyrinth, but also in terms of good yields. Labyrinths for entertaining and attracting tourists (pictures of growing rice of different varieties, etc.) For lost tourists, wooden bridges were installed, serving as viewing platforms, or just for beauty lovers who want to explore the surroundings.

The development of the creative potential of society (dramatized concerts, communication with the poetry of nature, places for contact zones (poultry farm, zoo, equestrian sport), agricultural labor) has become a famous component of the Versailles gardens. This model of organization of social interaction was so much liked that it became the object of centuries-old international imitation. Garden Rules "Versailles".

Formation of a holistic artistic image of a single theme, reasonableness of relationships, proportionality of planning elements: height of sculptures and their background, size of pools, width of avenues and height of trees, retaining walls, use of optical effects with reflection in the water surface of a large canal. Water devices - composite centers, which are fixed species rays. The parterre - a flat part of the garden in front of the house with flower beds was enclosed by a semicircular wall of stone or plants “amphitheater” with niches with a sculpture, a “secret garden” is an isolated element, bosquets are green halls are cabinets, open plantings are kenkos planted in squares with tall trees in divided into symmetric zones of different shape and functionality. Embroidery made of sand, crushed
brick, marble chips, glass, etc. was used for the first time. Today, the decoration of the tracks is complemented by 3D images.

The use of visual techniques for decorative tracks has historically developed in different cultures around the world. Emotional gardens of different “genres” - water, stones, mosses, awesome (with dark groves, overhanging cliffs, rumbling water of mountain rivers, etc.), laughing (open, sunlit fields, flowering plants), idyllic (calm water surface, island, pagoda). An integral (almost obligatory) part of the garden and the center of its composition is the reservoir. It occupies a significant part of the territory (30-70%). Near the reservoir buildings are located, forming the architectural core. These are park constructions - gazebos, verandas, platforms, galleries, bridges, orienting the gaze in the right direction with the help of figured apertures in the walls - “penetrating windows”, framed by gallery supports, by neutral decision or isolation of one of the sides of the route. The constructions have a bright coloring, shading green parks, and are part of landscape paintings based on contrasts: big and small, light and dark, wide and narrow, high and low; to achieve big in a small, to take into account the harmony of proportions; use gradual disclosure of species; consider time perception of landscapes. Oriental Feng Shui traditions in acquiring wealth reflect the shape of the circle of the entrance group, the reflecting bridge, the Ferris wheel, visually “driving the energy of water” to a commercial object or symbolic art objects made of stone, wood or metals. For example, put a coin in a cap and rub the bald spot of the sculpture “Beggar” - to wealth. Take a picture under the dome of the "Sphere of Love" – fortunately.

Man finds meaning in three ways: first, through what he gives life; secondly, by what he takes from the world; thirdly, by means of the position which he occupies in relation to fate, which he is not able to change. Accordingly, there are three groups of values: the values of creativity, the values of experience and values of relationship. The organization of the life process in multifunctional public spaces, aimed to meet the value needs. Anticipate - learn patterns of structure and the considered meanings. Consider the structure. The symbolism of spaces also reflects social ideals and financial investments.

4. The structure of the essence and feelings in the organization of public spaces

Formally, the planning of architectural and landscape spaces is divided into three main methods of planning:

- regular (geometric grid of the plan, clear contours of grounds, flower beds, etc.);
- landscape (free grid plan, winding paths, scenic ponds, etc.);
- mixed (a combination of elements of the regular and landscape methods of planning landscape objects).

However, the synthesis of arts in the emotional saturation of space with the inner essence (idea), with a sense of inner comfort, has been used for a long time. More symbolism of urban forms considered by the authors [5,21-23]

The oval of the square, delineated by Bernini’s colonnade, resembles the gesture of wide-open hands. Based on the description of the meaning of the Vatican flag with two crossed keys (one from the Kingdom of Heaven, the second from the Eternal City) and statues of the holy Apostles Peter and Paul located in front of the cathedral entrance, where Peter holds the keys to the Kingdom of Heaven handed to him by the Lord, there is a symbolic image of the square in the form of a “key of Saint Peter” or a huge keyhole to the hearts of the faithful parishioners.

The theme of hands is replicated in small architectural forms made by hands and grown on their plants.

Digitalization projects of cultural heritage are being created with fascinating processes of creation and destruction: “3D modeling of European cultural heritage”. Coir codes are used on buildings and museum exhibits on the walls. Walls turn into book covers. The alley of total dictation in the territory of Chelyabinsk State University, where each tree planted is in alphabetical order and tells amazing facts about Russian language where you can hide from the sun and prepare for the exams in the shade.
of the trees. And it is already rumored that if you water the trees from the “smart alley”, the session will be excellent.

5. Landscape as interior space.
The development of digital technology makes obsolete the usual model of the university with large audiences and long corridors.

The new multifunctional training center for the birth of new ideas among 33 thousand students is 12 towers, each of which represents a vertical from rounded educational rooms, with exits to the central atrium with gardens on the floors and large public space. An open atrium provides natural ventilation without air conditioning.

University College London was founded in 1826, the building was built by architect William Wilkins, a representative of classicism in English architecture. The traditional appearance of this university was broken for two weeks by Nicholas Feldmeyer. His new installation "Untitled (Wicker Portico)" did not leave anyone indifferent. A modern British artist who has intertwined columns of a university college in London (UCL) with ribbons of white fabric, introducing "fresh air" into the architecture with the help of contrasting materials. Textile theme continues with a new synthesis of architecture and art of lace. New features in new models of new (other) functions.

Located in a lively place, a multi-storey structure of concrete, glass and steel had to not only correspond to the dynamics of the surrounding space, but in some sense continue it, representing an unusual vertical “landscape”. The building and street space are considered in this case by the architect not individually, but as an interconnected structure. The project provides for the possibility of flexible variation of premises for the organization of offices, shops, cafes and housing. There are toilets and terraces on each floor and an elevator in the center. Vertical configuration was an attempt to create a "three-dimensional street" - this spatial solution was intended to revive the environment in which smaller scale architectural objects dominate, as well as create a synergistic effect for business.

Phytodesign survived the test of time long ago and turned into a complex combination of science and art. It's not even just such a fashion, it has long been the norm, the urgent human need to overcome the oppressive urbanistic atmosphere of both strict offices and standard “living quarters”. A variety of interior floradesign is ikebana, bonsai, collages. For example, the creation of landscape fragments with water devices. The murmur of water, the singing of birds, quiet music, the beauty and fragrance of flowering plants and their sanitizing effect have a beneficial effect on the human psyche and increase its efficiency, eliminating stressful states. It is possible to create florariums, floraterrariums, aquariums of various forms and in the form of a picture, aquaterrariums with amphibians for which the water part and the land are provided. By the nature of the design solution, all of the listed types can be mobile, stationary, embedded..

6. Conclusions
The information society forms new (other) human needs. Integrated rules of interaction between consumers and works of art in the architectural and landscape design. These are: the scenario of relations with the world, the route of action, the rules and sequence of the game, the system of connections between objects, the level of complexity of the interaction process, the emergence of emotions (from solving a multivariate task). There is a lot of variability of solutions in the saturation of the multifunctionality of design elements, the means of synthesis, affirming the universal human values of love, health, creativity and wealth. The concepts of positive impressions are analyzed, patterns of the structure of essence and sensation are considered. Justified replicability as a pattern of understandable and accepted by the society model of activity on historical examples. The features of landscape design as a synthetic art form, focused on the optimization of human activity taking into account anthropological, psyphysiological, environmental, aesthetic factors.
References

[1] Dutsev M V 2013 The concept of artistic integration in modern architecture: monograph (Nizhny Novgorod: NNGASU) pp 1–380

[2] Rappaport A 2014 The cycle of lectures "On the Eve" "Space and place (point and refinement)". https://www.youtube.com/watch?v=hJXe9QAN8fk / Date of circulation 10.12.2017

[3] Danilova E V 2013 The technology of the twentieth century as an impulse of imagination of (Moscow: LENAND) pp 383–399

[4] Kurpatov A V 2019 Fact card "Art". Lecture for the course of the Halls of Reason https://www.youtube.com/watch?v=qGhUWh2JiDk / Date of circulation 21.03.2019

[5] Davydova O V, Silivanova E V 2018 Integrative architecture for the expression by means of synthesis Trends in the development of science and education 45 66–70

[6] Berdyaev N 1994 Philosophy of creativity, culture and art. In 2 t. T. 1 (Moscow: Art) pp 1–542

[7] Davydova O V 2014 Landscape design in teaching architectural design Bulletin of the South Ural State University. Series: construction and architecture (Chelyabinsk, SUSU) 3 54–56

[8] Chernigov T 2017. Where do thoughts come from? https://www.youtube.com/watch?v=nRxXhQmOjwY/ Date of circulation 14.12.2017

[9] Kurbatov V Ya 2007 The general history of landscape art. Gardens and Parks of the World (Moscow: Eksmo) pp 1–736

[10] Akhmedova E A 2007 The Aesthetics of Architecture and Design: studies. allowance (Samara: SGAS) pp 1–432

[11] Shimko V T 2004 Architectural and design design. Fundamentals of Theory (Moscow: Publishing house "Architecture-S") pp 1–296

[12] Shimko V T 2004 Architectural and design design. Fundamentals of Theory (Moscow: Publishing house "Architecture-S") pp 1–296

[13] Shimko V T 2004 Architectural and design design. Fundamentals of Theory (Moscow: Publishing house "Architecture-S") pp 1–296

[14] Azizyan I A 2008 The dialogue of arts of the twentieth century. Essays on the interaction of arts in culture (Moscow: LKI) pp 1–592

[15] Bogovaya I O Theodoronsky V S 1990 Greening populated areas (Moscow: AST Publishing House LLC) pp 3–48

[16] Zyulen G 2003 All gardens of the world (Moscow: Astrel Publishing House LLC) pp 1–176

[17] Azizyan I A 2002 Theory of composition as a poetics of architecture (Moscow: Progress-Tradition) pp 1–568

[18] Davydova OV 2008 Landscape design (Chelyabinsk: SUSU, REKPOL Publish. LLC) pp 1–64

[19] Davydova O V 2008 Architectural landscaping (Chelyabinsk: SUSU, Publishing House REKPOL LLC) pp 1–70

[20] Kostina A V Mass culture as a phenomenon of post-industrial society (Moscow: ComBook) pp 1–352

[21] Kiyanych K 2010 Henry Sanoff: to the architecture, preoccupied with man and the design of people, with people and for people Architectural Bulletin 1(112) http://archvestnik.ru/node/2124/ Date of circulation 10.12.2018

[22] Davydova OV2009 Issues of ecology by means of landscape design Questions of urban planning and development: materials of the XV th to 74 th International Scientific and Practical (Penza: PGUAS) pp 327–330

[23] Davydova O V 2014 Symbols of town-planning forms Academic Bulletin UralNIiproektRAASN (Yekaterinburg: Academic Bulletin) 3 36–38

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