# BIFUNCTIONAL RELATIONS OF APPLIED ARTS AND DESIGN IN REGARD TO SOCIO-ANTHROPOLOGICAL ISSUES OF SCIENCE

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**Abstract**: Tectonic arts, which include architecture, applied art, design, in matters of artistic and anthropological genesis of Eurasia, are considered as an actual trend in modern design artistic activity. The relevance of tectonic arts is substantiated by its initial multifunctional connections with person and society. A person has always been well served by such spheres of his being as the object-spatial environment of the dwelling, the environment of economic and production activities, the space that meets his spiritual and confessional needs. The unity of biological anthropogenesis explains in many ways the universal forms of art being in a different cultural and historical aura, but at the same time they developed in an ethnolocal territorial context. The subject and purpose of this research is the bifunctional processes occurring in the sphere of active interaction of an artist, designer, with a potential consumer of an intellectual creative product. In the modern world of digitalization, a sustainable model of functional consumption, including the main properties of ergonomics and aesthetics of the developed objects of the environment, is superimposed on the unique aspects of mentality, immersiveness, gamification inherent only in this time, which are responsible for game interaction when communicating with consumer, while becoming pliable, flexible, plastic. The anthropogenic functions of design and applied art have formed into a specific ecosystem. As a result of the scientific method of contextual analysis of representative objects of object art and environmental design of the 20th century, created by masters of various world national schools and artistic trends, we come to the conclusion about the effectiveness of the interaction of technical, information technology, natural-scientific and social-humanitarian means, and the correlation of artistic activity and science.

**Keywords:** applied arts, design, bifunctionality, society, science, anthropology of art.

## INTRODUCTION

Recently, the theoretical and methodological basis for the study of spatial arts has been significantly expanding: from issues of terminology (M. A. Koskov, N. M Shabalina, J. Teofanović)<sup>1</sup>, key approaches and methods of analysis of various forms of figurative expressiveness (V. B. Koshaev, E.Yu. Novikova, O. A. Krivtsun)<sup>2</sup> to the problems of stylistic and functional organization of various objects of architecture, design, and applied art (V. Yu. Medvedev, I. Kuletin Kulafika)<sup>3</sup>. In the field of design and architectural activity, there is a persistent call for the need to include methods of green/ecological design in it, and today an integral ecosystem of tectonic arts is being formed, in which anthropological issues occupy an important place – the importance of arts for humans and society. In view of the relevance of the questions posed in the field of modern art history, the purpose of this study is to theoretically substantiate the bifunctional links of applied art and object design (as types of tectonic arts in the class of spatial arts) with a person and society.

# METHODS FOR ANALYZING THE ANTHROPIC PRINCIPLE OF CREATIVITY

Let us consider the tectonic arts from the point of view of socio-anthropological questions<sup>4</sup> of science and the aspects of functionality arising from them, more precisely bifunctionality. The main methods used in the science of anthropology are academic methods of observation, generalization and synthesis. In art history research, we add structural and contextual methods for analyzing objects of applied art and design. We use the method of contextual analysis to identify the functional specifics of subject art. The structural method is necessary to understand and define the property of variability in contemporary applied art.

At the heart of artistic creativity is the anthropic principle – human-creative, which leads to the study of the bifunctional qualities of objects of applied art and design.

<sup>1</sup> М. А. Коськов. Предметный мир культуры. Санкт-Петербург: Санкт-Петербургский государственный университет, 2004; Н. М. Шабалина. Степень условности в терминологии науки искусствоведения о предметном искусстве. Теория искусства, традиционная культура и творческий процесс. Москва: Московская государственная художественно-промышленная академия им. С. Г. Строганова, 2015, 173–176; Mirjana J. Teofanović. Terminology of design. Зборник радова: Прва међународна конференција SmartArt – уметности наука у примени Од инспирације до интеракције Факултет примењених уметности, Београд, 2020 Proceedings: First International Conference SmartArt – Art and Science Applied From Inspiration to Interaction Faculty of Applied Arts, Belgrade, 2020, 87–106. [ZbornikSmartArt 2019.pdf].

<sup>2</sup> В. Б. Кошаев. Проблема формирования общей теории художественного процесса. Электронный журнал: Искусствоведение и культурология. Москва, 2013, 14–19; Новикова Е.Ю.Философская антропология в теориях дизайна. Исторические, философские, политические и юридические науки, культурология и искусствоведение. Вопросы теории и практики. Тамбов: Грамота, 2013, № 11. Ч. 2, 136–138. https://www.gramota.net/articles/issn\_1997-292X\_2013\_11-2\_35.pdf; О. А. Кривцун. Антропология искусства.Вестник культурологии. Москва, 2018, № 1, 230–241. http://inion.ru/site/assets/files/4312/2018\_kul\_turologiia\_1.pdf

<sup>3</sup> В. Ю. Медведев. Научные аспекты дизайна. Санкт-Петербург: Санкт-Петербургский государственный университет промышленных технологий и дизайна, 2014; Кулетин Кулафика И. Свакодневна естетика у архитектури и примењеним уметностима. Прва међународна конференција Smartart – уметности наука у примени Од инспирације до интеракције Факултет примењених уметности, Београд, 2020. Proceedings: First International Conference SmartArt– Art and Science Applied From Inspiration to Interaction Faculty of Applied Arts, Belgrade, 2020, 479–484. [Zbornik SmartArt 2019.pdf]

<sup>4</sup> В. В. Бочаров. Теоретические проблемы социологии и социальной антропологии // Журнал социологии и социальной антропологии. Санкт Петербург, 2000, том III, № 1 http://www.jourssa.ru/sites/all/files/volumes/2000\_1/Bocharov\_2000\_1.pdf

A person is a measure in the process of creating object art, which means that the anthropus becomes one of the criteria for evaluating it.

The scientific term "function" means performance, purpose, role, that is, purposeful action. Accordingly, in relation to art, the content of the word "functions" means the purpose of a work of art. Initially, the fine arts were born as an activity subordinated to magical, mythological, and then religious functions. Also, at different times, art took on the role of interpreter of cosmological, ethical, social, aesthetic problems.

Russian scientists A.F. Losev, P.G. Bogatyrev, and V.E. Gusev tried to return to the concept of "function" in aesthetics and art history its original meaning, adopted in the exact sciences<sup>5</sup>. Its meaning lies in the designation of a certain type of variable links – the dependence of some phenomena on others. The consequence of such connections is a change in some phenomena as others change. Therefore, the main thing in the concept of function is the variability and variability of the interrelated properties of objects. In this sense, functionality is manifested in the dynamics of the historical development of art. A work of art in the context of historical time corrects or changes its functions. So, for example, an ancient temple can become a museum, an exhibition complex, and ancient Greek vases can acquire cognitive, informative and decorative functions. In tectonic arts, the functional meaning is considered basic. The idea, content, form of the future object is born from the function. Thus, the function combines the categories of benefit, ergonomics and beauty<sup>6</sup>.

## ANTHROPOGENIC FUNCTIONS OF DESIGN AND APPLIED ARTS

The artistic image of an object, its content and structural elements directly follow from its functional connections with man and the environment. The aspects of functionality of a thing are different, diverse. Let us consider the functionality of the tectonic arts according to the system of Moisey Kagan<sup>7</sup>, who defined the functions of art in its relation to man, society, nature, culture, and to its own needs.

An object for a person performed a specific utilitarian function and often simultaneously semantic, ritual and aesthetic. So, an ancient ceramic vessel was necessary for a person for cooking, storing and eating food. The shape of the vessel was largely due to the ease of handling in everyday life, but this was not enough. By touching an object, a person had to make this object immune to the unknown secret forces of nature, which, in his opinion, could harm a person and his fellow tribesmen. And in order to protect himself from dark forces, a person applied to the surface of the vessel – even to those that were not visible, for example, the bottom, – symbolic protective signs, rhythmically located on a volume or plane, forming an ornamental composition.

The ritual function was performed by clay figurines, which helped a person to express his attitude to the world, to pacify the secret natural cosmic forces. In turn, this happened by means of an ordered ornamental motive applied to the surface of the object, through which a person connected himself with the world and the space around him. The playful, informative, ritual functions of the toy were combined with

<sup>5</sup> П. Г. Богатырев. Вопросы теории народного искусства. Москва, 1971; А.Ф. Лосев. Бытие – имя – космос. Москва: Мысль, 1993; В. Е. Гусев. Функции Русская народная художественная культура (теоретические очерки). Санкт-Петербург, 1993, 96–106.

<sup>6</sup> The basic law was formulated in the era of late antiquity and is set forth in M. Vitruvius's

treatise "De architectura libri decem".

<sup>7</sup> М. С. Каган. Эстетика как философская наука. СПб. 1997.

the aesthetic ones. The toy established invisible connections of a person with the environment, with another person, with nature itself – it was a kind of regenerator and accumulator of natural phenomena. A person in communication with colorful clay figurines learned the world, became spiritually richer, cleaner in moral and civic attitude to the world. This is the function of object art – in its relation to man.

The original traditional clay toy taught, raised the child – shaped and developed creativity in him. The natural form underlying it was refracted, became meaningful, artistic and passed into the field of art. Through the object, connections between people were strengthened. These connections indicate another function of art in its relation to society. Everyday communication with an object that has a perfect artistic form transferred knowledge and experience accumulated by generations to a person, shaped his worldview, gave him the skill of discernment (intuition), and sharpened his taste. Russian traditional folk architecture with its decorative solutions of carved platbands (framing window openings), pricelin (carved boards that cover the end of a gable roof), "ohlupen" / "konyok" (the end of the upper part of the roof, made in the form of a horse's or a bird's head) - transformed nature in the architectural composition. This transformation is understood as the manifestation of the function of art in its relation to nature. It is important to mention the harmonious adaptation of Russian folk architecture to the surrounding landscape. In the open space of the countryside, the dominant feature has always been the "figurative vertical" of the Orthodox Church, which strengthened the connection between man and nature, and gave a harmonious, holistic solution to the open space of the countryside. A man in beautiful clothes also organically fit into the surrounding spatial environment and, with his presence, transformed it. For example, indicative in this respect is the so-called mowing shirt ("senokosnica"), which Russian peasant women wore during mowing - an important event of agricultural labor for peasants. The first day of mowing was perceived as a holiday, so the peasant women wore shirts with a richly ornamented border along the hem. The harvest shirt also served the purpose of thanksgiving, the worship of the land that gave man the harvest. The masters strove in everything to get closer to the natural harmony of nature, and in this approximation they were helped by the law of expediency and beauty, which guided them in applied art.

In modern environmental design, there is a desire for landscape improvement both separately adjacent to the house site, and building an integral infrastructure of the city quarter, district. Green elements (green roofs) often grow into the structure of an architectural object, thereby providing an ecological aura for both the person himself and his environment and having a beneficial effect on nature.

The function of art – in its relation to culture, is clearly manifested in a figurative-syncretic basis. Art is able to represent the culture to which it belongs, and in the "dialogue of cultures" opens one culture to another. Thus, Art Nouveau artists creatively borrowed many elements and motives of art from previous eras, for example, the Romanesque and Gothic Middle Ages, as if conducting a kind of dialogue with the ancient era. The art of the past gave a kind of creative impulse for the birth of a new art form of the future.

The function of art and design, in its relation to one's own needs, is to regulate one's own development. In the process of regulation, it is important to note two features. The first is that other functions require art to be constantly renewed in accordance with the changing content of life. The decoration function develops the aesthetic qualities of a clay toy and enhances its ornamentation and scale of forms."Green roofs" in a modern metropolis solve the problems of videoecology and allow a person to actively interact with the visible environment.

A certain ratio of tradition and innovation is noted in art. The second feature is that the influence of one stage in the development of art on another has an aesthetic character. One layer of culture can manifest itself in an altered form of another. For example, new variations of forms or new subjects in contemporary folk art are necessarily built into the framework of the traditional one.

In our time, the anthropogenic functions of design and object art have formed into a specific ecosystem. In the middle of the 20th century, the German designer Dieter Rams defined nine principles of "good design", a unique system based on anthropic design principles. According to Rams, good design should be: 1) innovative and created in partnership with the latest technologies, 2) ergonomic – which makes the object easy to handle and optimizes its use by a person, 3) aesthetic – design forms the environment and determines the state of a person, 4) understandable – which makes the structure of the object concrete for the purpose of its use, 5) honest – the design should not try to seem what it is not in reality, 6) not intrusive – the decor does not prevail over the design of the object, 7) durable and universal at all times, 8) environmentally friendly – which saves resources, minimizes physical and visual pollution, 9) consistent, minimalistic and accurate in accordance with the consumer's request.

The universal model of good design is based on the human measure, which is explained by its involvement in everyday life of people. But as society develops, there is a change in the relationship of the figurative-expressive artistic form to the bifunctionality that the object performs. The international vector, clearly defined in projects since the beginning of the 20th century, "form follows function", has changed its direction since the middle of the century to the movement "play follows function". We are convinced of this by the bold, liberated/free projects of artists from various national schools of world design, such as: Ingo Maurer, Fabio Novembre, Alessandro Mendini, Ettore Sootsas, Philippe Starck, Ron Arad and others.

The line of dialogue between the art of the past and the present is persistently pursued by Alessandro Mendini in a series of furniture design ("Proust" 1978, "Tonet" 1979, Kandinsky 1979). The method of playing with a subject-spatial environment and a person is actively used by Ingo Maurer in light compositions ("Birdie" Chandelier, 2002; "Luzy Take Five" Lamp, 2018). Avant-garde shaping as an artistic method and style that has embraced the art of many countries does not remain self-sufficient and strives for new horizons. By complicating creative tasks, artists summarize the design experience of previous eras and show their own attitude towards it, resorting to hyperbole, irony, and play. The master always goes beyond the subject shaping – he is interested in human interaction with the space of the environment, its filling. The designer's focus is on environment-event, environment in different ways with the help of lighting. Lighting design can be dramatic, theatrical, ironic, or meditative and conceptual.

Italian designer Fabio Novembre defines the tasks in his projects as follows:

"For me, the things that I create are a kind of shell for a person. I always imagine people who will be a kind of filling for my things. It is impossible not to think about people and how they will use my furniture. I have never looked for only the form, for me communication through the thing is more





important, and it is often advantageous from the point of view of design – to see the object through the process of communication / interaction of people with each other, people with the object"<sup>8</sup>.

"Communication through a thing" is more than just a form of a thing; communication does not imply submission, but a dialogue with a person and the environment in which he is immersed. In turn, a person can interact with open and internal/closed

<sup>8</sup> Фабио Новембре: "Я очень свободный человек": Интервью с дизайнером. http:// www.sibdesigner.ru/Stili/3/Fabio\_Novembre\_JA\_ochen\_svobodnij\_chelovek



space in different ways, hence the simultaneous variability of the solution to the design images of the thing. This is the meaning of the design method of play, the development of which we see in many designers.

Ron Arod is the creator of futuristic sculptural furniture made from hardened steel and interior decorations and glass installations, actively applying innovative digital design methods, making things multivariate and unique. The Bouncing Vases (2000) collection, funded and marketed by the Belgian Galerie Mourmans, was created from polyamide powder by laser sintering. The customer chose the shape of the vase from computer-generated models, after which it was deleted permanently. As a result of the application of innovative technology, such an item became unique, one-of-a-kind for its owner.

In another series of "Vaz-nests" (2018), first shown at the Milan exhibition in 2018, Arod successfully applied the form transformation method, which allows changing the volume and height of glass vessels with the effect of a multilayer technique. The image was associated with a bird's nest and corresponded to a specific technological technique. The experimental artist dives into the fragile plasticity of glass and finds meaning under the lens of optical lenses in a series of glass vases called "Where Are My Glasses?" (2018).

Today, avant-garde shaping as an artistic method and style that has embraced the art of many countries is not self-sufficient and strives for new horizons. By complicating creative tasks, artists summarize the design experience of previous eras and show their own attitude towards it.

In the development of spatial arts, there is a balance in the ratio of tradition, invention and innovation. Artists extract experience from the meanings and images of the past and multiply it. The axiological approach to creativity manifests itself regardless of the territorial / geographical boundaries of the artist's residence and

Fig. 3



becomes universal. New variations of forms or new themes in art are often built into the framework of the "familiar", recognizable. The norms of human ethical behavior that have been established in society today are undergoing changes and are explicitly or indirectly manifested in art<sup>9</sup> and the subject-space environment. The measure of the anthropic principle and criterion in assessing art, like art itself, is historically changeable.

## CONCLUSIONS

As a result of the analysis of the functions of spatial architectonic arts, we come to the conclusion that the set of functions of art is a complex multilevel system in which the law of anthropological significance operates – the law of correlation of various functions in interaction with a person. The method of variability of object shaping is adapted to changes in artistic and expressive means in design. The variability of the replicated thing in modern design is justified by the possibility of using digital computer programs 3-d modeling and printing. Applied art and product design initially laid down the simultaneous development of several functions based on the concepts of benefit, strength and beauty. Tectonic art is bifunctional.

In the modern changing world of digitalization, a sustainable model of functional consumption, including the main properties of ergonomics and aesthetics of the developed objects of the environment, is superimposed on the unique aspects of mentality, immersiveness, gamification inherent only in this time, which are responsible in the era of post and neo-postmodernism for game interaction when communicating with consumer, while becoming pliable, flexible, plastic. The movement of design-architectural design "form follows function", which took shape at the beginning of the 20th century, was transformed in the second half of it into the attitude "game follows function". The game, in turn, is variable.

Variation in design in the context of its bifunctionality and the anthropological in accordance with the technological capabilities in modern times, can be perceived as a unique opportunity to achieve diversity in the development of prototypes of

<sup>9</sup> О. А. Кривцун. Антропология искусства. Вестник культурологии. Москва, 2018, № 1,

<sup>230-241.</sup> http://inion.ru/site/assets/files/4312/2018\_kul\_turologiia\_1.pdf



mass products. The variability of design techniques makes the thing unique both for the creator-artist and for its potential consumer. The qualitative indicators of things reproduced in circulation are expanding, which indicates new possibilities for introducing cyber-physical systems into the production of artistic objects. In the conditions of the Fourth industrial revolution in the field of design, the augmented reality technology is being actively developed and implemented, which also meets the essence of the variable method and the urge of a modern person to show their individuality. In our time, the importance of personification is increasing – the customization of products of design activity – and remains an indispensable property of single/unique objects of art.

As a result of a contextual analysis of representative objects of object art and environmental design, created by masters of various world national schools and artistic trends of the 20th century (Dieter Rams and Ingo Maurer in Germany, Jean Nouvel and Philippe Starck in France, Alessandro Mendini, Ettore Sootsas, Fabio Novembre in Italy, Ron Arad in England, etc.), we come to the conclusion about the effective-ness of the interaction of technical, information technology, natural science and social and humanitarian means, and the correlation of artistic activity, science and digital technologies – in order to meet the material and spiritual needs of a person.

Discussion of this topic involves considering the specifics of the creative activity of an artist/designer in a broad socio, cultural and anthropological aspect.

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#### Наталија М. ШАБАЛИНА БИФУНКЦИОНАЛНИ ОДНОСИ ПРИМЕЊЕНЕ УМЕТНОСТИ И ДИЗАЈНА У ВЕЗИ СА СОЦИО-АНТРОПОЛОШКИМ ПИТАЊИМА НАУКЕ

Тектонске уметности, које укључују архитектуру, примењену уметност, дизајн, у питањима уметничке и антрополошке генезе Евроазије, сматрају се стварним трендом у савременој уметничкој делатности дизајна. Релевантност тектонске уметности поткрепљена је њеним почетним мултифункционалним везама са личношћу и друштвом. Човеку су одувек служиле такве сфере његовог бића као што су објектно-просторно окружење становања, сфера економских и производних активности, простор који задовољава његове духовне и религиозне потребе. Јединство биолошке антропогенезе на много начина објашњава универзалне облике уметности који се налазе у различитој културно-историјској аури, али су се истовремено развијали у етнолокалном територијалном контексту. Предмет и сврха овог истраживања су бифункционални процеси који се дешавају у сфери активне интеракције уметника, дизајнера, са потенцијалним потрошачем интелектуално креативног производа. У савременом свету дигитализације, стабилан класичан модел функционалне потрошње, укључујући основна својства ергономије и естетике развијених објеката окружења, био је надограђен у односу на јединствене аспекте менталитета, импресионирањем, анимирањем потрошача, иако је постао савитљив и флексибилан. Антропогене функције дизајна и примењене уметности обликовале су се у специфичан екосистем. Као резултат контекстуалне анализе научне методе репрезентативних објеката објектне уметности и дизајна животне средине 20. века, коју су створили мајстори различитих светских националних школа и уметничких трендова, долазимо до закључка о ефикасности интеракције техничких, информационих технологија, природно-научних и друштвено-хуманитарних средстава, и корелације уметничке делатности и науке.

Кључне речи: примењена уметност, дизајн, бифункционалност, друштво, наука, антропологија уметности.