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**PARAMETRICISM AS A METHOD OF ACHIEVEMENT A UNITY
OF ARCHITECTURAL FORMS AND INTERIOR**

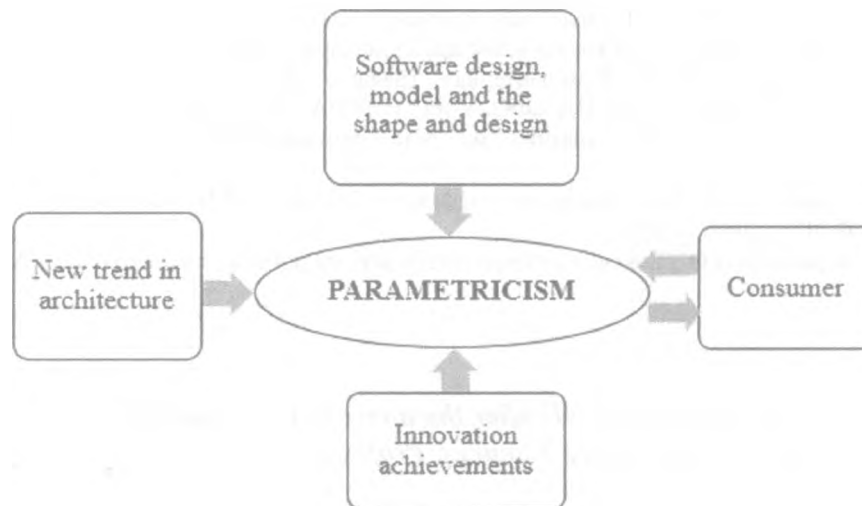
Біз параметризмді сәулеттік дизайн жағғынан қарастырайық деп шештік. Біздің мақсатымыз берілген сәулеттік стильдің сәулеттік объектінің ішкі толығына, параметризмге тән ерекше пішінді кеңістіктегі адамға өсерін анықтау.

Мы решили рассмотреть параметризм с точки зрения архитектурного дизайна. Наша цель выявить влияние данного архитектурного стиля на внутреннее наполнение архитектурного объекта, его воздействие на человека в пространстве, обусловленном столь необычной формой, характерной параметризму.

At the turn of XX-XXI centuries new trends and directions in architectural design began to develop. They are characterized by using computer technology. Appearing at the end of XX century, they continue to improve introducing new technology in the production of inventions. One of the trends in architecture, which claims the driving style of the new "digital" era is - parametricism.

Parametricism is a new trend in architecture, and a new movement in architectural thought, a new architectural style, taking as a basis for computer modeling and programming architecture. Essence of the term lies in the software design, in which the architect defines parameters and the designer expects to model its shape. Parameter changes involve changing the model. The appearance of this style of architecture preceded the transition advanced, flexible technology in the design of the aviation industry in a car. This important point falls on the 90th of the last century. All of the iconic buildings of recent times can be identified and, moreover, combine in one direction, which features flexible architectural forms. Generally, architectural shaping (under new direction – form definition), in accordance with the specified parameters and algorithm is the "cornerstone" parametricism [1].

Pic. 1 An innovative method of determining parametricism and his actions to the needs. But above all, it is necessary to mention that the new style was called to declare itself in architectural design, and to be recognized worldwide. In 2008, Patrick Schumacher (ZHA, Zaha-Hadid Architects) said that over the past 15 years new style of avant-garde architecture has matured. Therefore parametricism was presented at the 11th Architecture Biennale in Venice, and Schumacher's article was called "manifesto parametricism". Since then, the name of the style spread largely among critics [2].



To understand the essence of the style correct definition must be given to it. As a conceptual definition Patrik Schumacher offers the following formula: parametricism implies that all architectural elements must be parametrically linked, thus providing the flexibility of the entire system. Parameters, together with algorithmic methods of forming predetermine fundamental ontological change within the basic key elements defining architectural style. In practice, instead of the classic songs from the ideal geometric shapes instead of straight lines, rectangles, cubes, cylinders and pyramids, using new elements - dynamic, adaptive, variable geometric objects of parametricism [3].

Theoretical studies of parametricism as style relevant today due to the increasing number of innovations in architectural design. We decided to consider parametricism in terms of architectural design. Our goal is to identify the impact of the architectural style on the internal content of an architectural object, the impact on human in space, caused such an unusual shape, characteristic of parametricism. Relevance of this study is primarily determined, insufficient knowledge of this area and the lack of general works on this topic in both the domestic and foreign art history.

Interest in the "new images" in architectural thought allows us to find new solutions in the organization and design of object-spatial environment. This is primarily reflected in the architectural shaping. It should be noted two significant points. On the one hand, the designer has a new tool to create complex geometry and structure to form, on the other - faced with the need to develop non-traditional methods, such as writing a script instead of a pencil.

At present time, there is also a need to penetrate deeper into the essence of space, to understand what are the best resources to interact with it, and see just how a person interacts with the space, and clearly define the boundaries of the external and internal parts of the spatial object. Function and geometry interdependent functioning as the form and content of the feature as the ratio of its external and internal spatial processes.

Architectural environment is part of a dynamic whole, shaping our lives. It affects the person to a large extent unconsciously, regardless of his wishes. "Wednesday, organized architecture, gently but continuously affects the emotions, the mind and human behavior". Knowledge about the impact of architectural form, and especially the architectural and spatial forms as interior space, where modern man spends most of his time on his inner world, his mental state is very important for building architects ecclesiastical architecture, introducing the concept of designing emotions and feelings man.

Consider the aspect of human interaction with the world around him - the impact on the architectural form of man and his emotional state. Should consider shaping laws and principles that allow architects to create a positive emotional climate, convenient functionally and aesthetically attractive space.

Since, in the style of architectural objects parametricism peculiar variety of forms, often superficially similar to the objects of natural formation, but having a different structural basis, we decided to elaborate on this concept as a form.

Form - the notion multivalued. The interior design and architecture, it often refers to the formal structure - the location and method of combination of elements and parts of the composition, make up the whole. She is one of the most important characteristics of the interior space.

Shape space largely determines the overall solution of the interior space, can help create a certain mood of the visitors, as well as to emphasize its functional purpose.

When designing a building in the style of the architect before parametricism seeks architectural organization and the internal space of the building - the interior. The outer appearance of the building in one degree or another should reflect its purpose, its internal structure.

One of the most difficult tasks in the art interior design of the building is to create a parametric form of the transition from the outer to the inner space so as not to disrupt the unity of the architectural perception.

To achieve unity between the external architecture and interior design in human perception may apply, for example, receiving a repeat elements of the architecture of the facade or the nature of architectural forms in interior design.

Another technique to achieve communication between the exterior and interior of the building is not a repetition of elements or the nature of architectural forms, but on the contrary, their contrasting opposition. On the basis of the contrast can be achieved unity and harmony of the whole. Following this technique, we can offer the use of interior design style elements parametricism structural shapes and straight lines.

Important tool in creating unity with the interior architecture of the building exterior and its environment is the use of loggias, verandas, terraces, balconies that create a gradual transition from open to semi-enclosed space, and finally to a completely closed (the premises).

In modern architecture uses another, the most effective method of creating unity in the architecture of the inner and outer space - the widespread use of glass walls, where the elements of the internal parts of the building (stairs, walls, pillars, equipment) are perceived from the outside and the interior elements of the composition as well as building facades.

Furniture also emphasizes the purpose and style of the room, talking about its features and is an integral part of the interior. Its placement, shape, material and color must also be subordinated to the general architectural design interior parametricism. Furniture in this style in its form is very similar to something natural stone, tree branches, mountain hill. The outlines of the same shape as the product of natural creations. Sofas and chairs are made in a light, almost weightless frame swinging interior, most of the furniture on the legs to create space between them and the floor for the effect of "floating". Interior items, furniture, accessories are as close to nature: they are smooth, round, oval and no sharp corners. It may be a drop of water, leaf tree, seashell and more. In the interior style tends to streamline subjects that if they ask themselves in hand oval pedestal tables round-shaped sofas with sleek edges and complicated set of pillows. Furniture parametricism maximum ergonomic, she repeats the curves and contours of the body, perfect size and gives a nice tactile sensation.

When you create the interior space of the building in the architectural style parametricism should consider a few rules - taboos that Patrick Schumacher dictates architects within the

program or parametric style "avoid familiar typologies, avoid flat/hermetic objects, avoid clear spaces/territories, avoid repetition, avoid straight lines, avoid right angles, avoid corners and most importantly, do not add or remove without complicated joints "and dogmas" do joints, increase, decrease, territorial spacing, distort, repeat, use curved lines, curves, invent elements do script not a copy " [4].

Thus, within the interiors of these buildings are promoting the rejection of the usual, constructivist forms and allow you to implement the most incredible design fantasies. This new style uses the space to naturally differentiate and correlate all the design elements and subsystems. The purpose - to strengthen internal interdependencies within the design of decoration as well as external unity and continuity within the complex urban landscape [5].

Parametricism in the twenty-first century is positioned as the most comfortable and ergonomic style to create an environment of man. Proponents of this style of the number of designers and architects draw inspiration from nature, borrowing her sleek natural forms and efficiently introducing them into the architecture and construction of buildings.

The main objective of parametricism in architectural design is to combine the shape and volume so that all portions of an object or building as efficiently perform its function with minimal material. It is legitimate in terms of economy and ecology.

Formed new ideals of beauty based on constant transformation and transformation, combining the ephemeral, and flow dynamics. Standard of beauty becomes a trace of movement, bend and break. Prevalence in the XXI century architecture curved surfaces over straight - is the human desire for a truly beautiful and natural. And as parametricism style plays an important role in this direction.

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ӘӨЖ 515

БІЛІМ АЛУШЫЛАРДЫҢ СЫЗБА ГЕОМЕТРИЯДАН БІЛІМ ДЕҢГЕЙІН ТЕКСЕРУГЕ АРНАЛҒАН ТЕСТ СҰРАҚТАРЫН ҚҰРАСТЫРУ

В статье рассматриваются вопросы проверки уровня знаний обучающихся по начертательной геометрии. В качестве основного способа контроля знаний предлагается тестирование. Приводится пример составления тестовых вопросов по начертательной геометрии.

The article deals with checking the level of students' knowledge of descriptive geometry. As the main method of control of knowledge offered testing. An example of preparation of test questions on descriptive geometry.