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ELINA KOVALENKO, MARINA CHERNYSH, TAMARA ZAGORUIKO
Donbas National Academy of Civil Engineering and Architecture**DESIGNING MUSEUM AND EXHIBITION COMPLEXES: THE ARCHITECTURE
OF MODERN MUSEUMS**

Abstract. Every year all over the world the interest in architecture of modern museum buildings increases. Each country, participating in the process of globalization, tries to demonstrate the world its success in this sphere. At the same time the rate of construction of the complexes, where various cultural and art events are held, is increasing. In the process of designing such museums and exhibition complexes architects have to solve a variety of problems, ranging from the external appearance of the building to the convenience of the formation of expositions. This article is dedicated to the study of the problem of designing a new type of a modern museum: a museum and exhibition complex. The design principles of the complexes under consideration are discussed, and examples of completed projects are given. On the basis of the findings recommendations are given for further research in the design of museums and exhibition complexes.

Key words: museum, museum and exhibition complex, design, architecture.

PROBLEM STATEMENT

Recently, many countries around the world have begun to pay close attention to the architecture of modern museums, which host a wide variety of exhibitions in the field of culture and art. Alongside with this a wave of construction of new museum and exhibition buildings, combining cultural centres, conference halls, libraries, commercial exhibition spaces, art galleries and even parks has come into being. Therefore, the existing concrete boxes, built in the last century to house exhibitions, are no longer satisfying to exhibitors and visitors. And this dissatisfaction is connected not only with the convenience of the expositions, but also with the appearance of the building. Today, a visitor before visiting a museum wants to prepare himself/herself for the perception of a museum collection by getting an emotion from the architectural and artistic image of the building. This poses new challenges to the architect in the field of designing museum and exhibition complexes and determines the relevance of further consideration of this problem.

ANALYSIS OF RECENT STUDIES AND PUBLICATIONS

Few works are devoted to the study of the design principles of museum and exhibition complexes, due to the fact that this type of buildings and structures is little studied and has not yet become widespread in domestic construction practice. However there are works by V. V. Panov, Y. A. Nikitin, E. S. Bakushina, P. S. Kovalenko, which are close to the subject of the research, where separate architectural aspects are considered. The works by D. A. Ravikovich, A. M. Kulemzin, and V. Y. Dukelsky reveal theoretical questions of museology, where they examine museum as an institution of culture and the features of its social functions. The articles of E. A. Gaivoronsky, L. N. Bogak, D. A. Chala, E. V. Roslyakova, E. S. Kravets trace the town-planning and architectural aspects of organization of museum complexes.

V. I. Revyakin's recommendations on designing museums in general are devoted to the study of museums, where the main principles of designing museums, their classification, and the experience of domestic and foreign museums and exhibitions are considered.

However, the issue affecting the specifics of the design of museum and exhibition complexes remains open and requires further research.

OBJECTIVES

Description and analysis of the characteristics of the design of museum and exhibition complexes, and then formulation of the prospects for further research.

BASIC MATERIAL

Modern reality has made online ticket booking and virtual visits to museums a commonplace. In the era of pandemics and stricter requirements for public spaces, museums have a number of problems that need to be solved as quickly as possible. And this applies not only to limitations on the flow of visitors, but also to outdated approaches to the formation of museum architecture, formulaic working concepts, and adaptation to the requirements and perceptions of modern man. Besides, in the existing buildings there is an acute shortage of space for modern museum needs, which has had a significant impact on the reduction of the target audience and, consequently, on the financing of the institutions. Museums which are oriented to serve visitors according to the templates of the last century and exist solely by selling souvenirs and entrance tickets have the hardest time. Their work patterns and the external appearance of their buildings no longer attract visitors. How can the architecture of museums influence the demand for their activities? The answer is obvious: before entering a museum, a visitor wants to prepare himself/herself for the perception of a museum collection by getting emotion from the architectural and artistic image of the object. So, let us consider the principles of design of modern museum and exhibition complexes and define how the architecture of modern museum buildings is formed.

The principle of modernity

«Creating new museums according to old recipes is a dead-end way of developing the industry» – this statement belongs to the founder and head of the architectural bureau IQ, Erik Valeev. Its meaning is that even the most famous giants of the exhibition world have to orient and adapt to the modern formats of the society. First of all, this is reflected in the usual museum activities: building up its own audience online, holding online exhibitions and seminars, and the possibility of using multimedia technologies (fig. 1, a). In other words, the museum should become an interactive platform for the intersection of online and offline activities. Of course, all these features must be taken into account when shaping the architecture of the building. Thus, abandoning the outdated concepts based only on exhibition activities, a modern museum can become an attractive multifunctional place to spend leisure time. And the expansion of its functions will help to bring additional income to the budget of the institution [1].

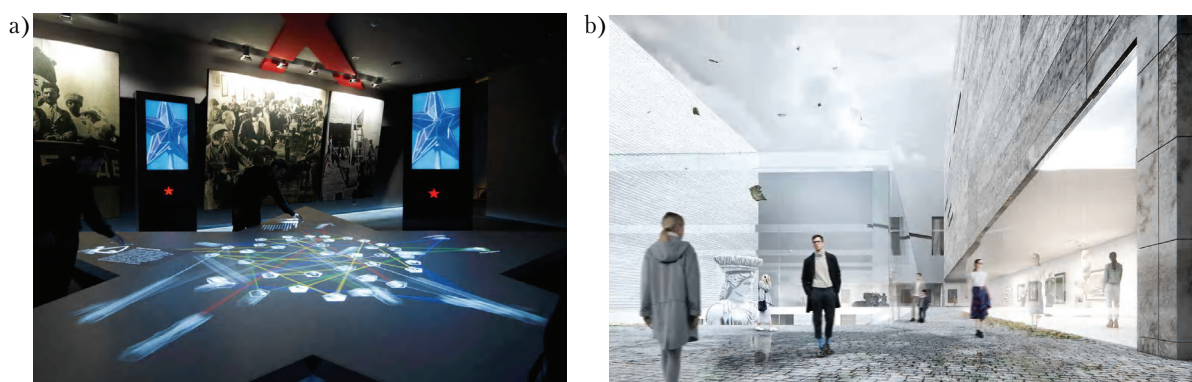


Figure 1 – An example of the principles of modernity and accessibility: a) Victory Museum in Moscow – the main concept of the museum is to create a unique exhibition space through the use of multimedia technologies; b) Inter-Museum Cluster in Moscow (the design concept of the architectural bureau IQ) – there is an idea of forming an open museum space, in which a connection between the visitor and the exhibition is established.

The principle of accessibility

This concept is based on the interaction of the pedestrian and the site. When approaching a museum building, a person practically always sees only the entrance group of the building and posters, which in the conditions of the urban landscape draw attention to the objects only for a few seconds. As a rule, it is not enough to interest a passerby in visiting a museum, and if the architecture does not reflect the essence of

exhibitions contained there, a person will not want to come back here ever again. However, if we slightly open up the exhibitions to the passerby through the use of architecture and design, it is possible to create emotional intrigue by playing on the natural curiosity of a person (Fig. 1, b). This effect can be compared to the click bait effect when an object does not show much, but it is enough to sow positive motivation [2].

The principle of openness

«In order to remain interesting to the public, exhibition spaces must be more open, multifunctional and technological, but several global challenges will have to be met along the way» [3, P. 150]. This principle forms another key point in shaping museum openness – the need to refuse treating visitors as spectators in the theatre and the strict division of space into permitted and forbidden zones (Fig. 2, a). Today, people think more and more interactively, which means that the invisible wall between the museum and its guest must be torn down.



Figure 2 – An example of the principles of openness, universality and of formation of the semantic model of the museum: a) The interior space of the 21st Century National Museum of Art in Rome – the building not only harmonises completely with the surrounding urban fabric, but also forms the most open space between its visitor and the exhibition; b) Oslo Museum of Architecture – still images and transforming shelving form a universal space suitable for organising different routes and exhibitions; c) Fusion Museum and Exhibition Complex in Lyon – approaching the building the visitor makes a connection of the mind with the unknown.

The principle of universality

Considering a modern museum in the functional aspect, we can say that it is a museum and exhibition complex of universal inner spaces, designed to form various scenarios of exhibitions, as well as the organization of creative processes and interaction with visitors. The meaning of the spatial universality is in the search of conceptual design solutions, thanks to which a new approach to the typology of museum spaces is being formed [4, P. 31–37]. This typology can include the buffer recreational, multifunctional, communicative zones, but it assumes the possible transformation of one zone into another, providing the universal use of the museum interior space (Fig. 2, b).

The principle of formation of the semantic model of the museum

Forming the architecture of a museum, the architect creates a unique museum space, gives the building a special physical shell to store the expositions, and, thus, involves the visitor into the world of the museum. This is achieved mainly through the creator's inherent means of artistic expression: the texture of materials, texture, lighting, forms and spaces of the outer volumes of the building. A visitor observing such architecture, unwittingly, becomes interested in the figurative features of the building, and, based on the conceptual model, obtained in his/her perception, builds his/her expectations from the internal contents [5, P. 102–108]. Thus, we get the museum architecture, which is built on the creation of new grounds for the generation of visual images, formed through the sensual interrelation of man and the surrounding world (Fig. 2, c).

Based on the above, it can be assumed that just a few fundamental design principles are capable of changing the architecture of a modern museum, making it the core of the concentration of public interest. Today, the architecture of museums and exhibition complexes delights the visitor with its architectural and artistic image itself, creating the desired emotion in them before the visitor sees the museum's collection. Therefore the relevance of further research into the design of contemporary museum and exhibition complexes is growing, and architects have yet to grasp the principles of modern museum architecture. Taking into account the degree of globalization in the world and the use of modern technologies, the detailed consideration of multimedia technologies and the formation of transforming expositions in the formation of the internal spaces of museums and exhibition complexes can be considered as recommendations for further research.

CONCLUSIONS

The basic principles of designing contemporary museum and exhibition complexes have been discussed in the article. It has been established that using these principles is a very topical trend capable of changing the architecture of a modern museum, making it the core of public interest concentration.

The examples of realized and conceptual architectural projects of museum buildings are considered and given, it is established that many stated principles can be traced in the world museum architecture. Based on the findings, recommendations for further research into the design of museum and exhibition complexes are given.

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ПРОЕКТИРОВАНИЕ МУЗЕЙНО-ВЫСТАВОЧНЫХ КОМПЛЕКСОВ:
АРХИТЕКТУРА СОВРЕМЕННЫХ МУЗЕЕВ
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Аннотация. С каждым годом во всем мире интерес к формированию архитектуры современных музейных зданий возрастает. Каждая страна, участвуя в процессе глобализации, старается продемонстрировать миру свои успехи в данной сфере. Вместе с этим наращиваются темпы строительства комплексов, где проводятся разнообразные мероприятия в области культуры и искусства. Архитекторам в процессе проектирования таких музейно-выставочных комплексов приходится решать самые разнообразные задачи, начиная от внешнего облика здания, заканчивая удобством формирования экспозиций. Данная

статья посвящена исследованию проблемы проектирования нового типа современного музея: музейно-выставочного комплекса. В статье рассматриваются принципы проектирования рассматриваемых комплексов, приводятся примеры реализованных проектов. На основании полученных выводов даются рекомендации для проведения дальнейших исследований в области проектирования музейно-выставочных комплексов.

Ключевые слова: музей, музейно-выставочный комплекс, проектирование, архитектура.

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ПРОЕКТУВАННЯ МУЗЕЙНО-ВИСТАВКОВИХ КОМПЛЕКСІВ:
АРХІТЕКТУРА СУЧАСНИХ МУЗЕЇВ
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Анотація. З кожним роком у всьому світі зростає інтерес до формування архітектури сучасних музейних будівель. Кожна країна, беручи участь у процесі глобалізації, намагається продемонструвати світові свої успіхи у цій сфері. Разом з цим нарощуються темпи будівництва комплексів, де проводяться різноманітні заходи у галузі культури та мистецтва. Архітекторам у процесі проектування таких музейно-виставкових комплексів доводиться вирішувати найрізноманітніші завдання, починаючи від зовнішнього вигляду будівлі, закінчуючи зручністю формування експозицій. Ця стаття присвячена дослідженню проблеми проектування нового типу сучасного музею: музейно-виставкового комплексу. У статті розглядаються принципи проектування комплексів, наведені приклади реалізованих проектів. На підставі отриманих висновків даються рекомендації щодо подальших досліджень у галузі проектування музейно-виставкових комплексів.

Ключові слова: музей, музейно-виставковий комплекс, проектування, архітектура.

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