

## **MODERN ARCHITECTURE IN HISTORICAL DEVELOPMENT (CONCEPTS AND APPROACHES)**

**Melnik N. V.**, Associate Professor of the Department of Design of the Architectural Environment

**Demenko A. Ye.**, Assistant Professor of the Department of Design of the Architectural Environment

**Mirets M.**, a third-year student

*Odessa State Academy of Civil Engineering and Architecture*

**Abstract:** The article is of a generalizing nature; the authors investigate the problem associated with architectural design in the historical environment. The newly built civilian objects are considered as examples of the organic interaction between “old” and “new” in European cities. The authors’ positions of domestic and foreign professionals regarding the development of the potential of the historical centres of modern cities are considered.

In connection with the dynamics of urban growth in the XXI century, the problem of renewal and development of historically established centers arises. Development as a modernization of the historical environment assumes a high-quality level of integration of relevant functions in the unique conditions of authentic urban structures. The cultural aspect of the problem is to solve the main problem of the historical environment - the preservation and protection of the valuable architectural and urban planning heritage. The authors highlight the need for an integrated approach to the problem and formulation of a development strategy. The experience of Odessa shows the negative results of delay in such matters. Urban space as a living organism presupposes a progressive process of regeneration of both the urban structure and the “tissue” of the city, filling the space and being subordinated to the structure.

A scientific approach presupposes discussion, variability and flexibility concerning the protection and development of the historical environment. However, taking into account the whole complex of economic, administrative, and cultural conditions, we can say about two main approaches in relation to the historical architectural environment in Ukraine.

One is based on a conservative approach and denies the objects of modern architecture in the historical environment. This approach assumes that a historically formed urban planning formation is an integral urban planning phenomenon and only allows the construction of new objects in historical styles, allows the priority task of restoration and reconstruction of existing objects.

Another approach is based on a dialectical approach and allows the introduction into the historical tissue of the city of new objects that meet all progressive achievements of engineering and technology, have modern and current features of the style (stylistic direction). At the same time, an important aspect is the novelty and high aesthetic level of architecture, due to the requirements of modern society. The logic of this approach comes from the very essence of architecture, placed in the classic triad of benefit, strength and beauty.

The most important factor that determines the value of the historical core of the city, in particular, the historical centre of Odessa, is the integrity of the historical structure, the interaction of all elements of the architectural complex, and a balanced urban infrastructure. At the same time, the architectural complex consists of objects of different value categories. Some are historical and architectural monuments of the universal, state and local importance. Others are authentic objects of “back-ground” development that contribute to the integrity of the city’s historical tissue. This is the picture that shows a historical accuracy.

According to the authors, the scale for determining the objective value of each architectural object in this case is of a relative nature and, to a large extent, in our time is not the primary task of preserving the architectural heritage. The task of an integrated approach to the problem and elaboration of a preservation strategy is a priority task. In recent years, intensive construction has taken place on local fragments of the historical part of the city, which leads to the final destruction of the historical city. In many cases, modern civil engineering works are monotonous and have doubtful cultural qualities, and at the technical level they exacerbate the situation of collapse at the infrastructural level.

There is an international, in particular, European experience in solving the problem of the conflict between new and historical in the cities of Germany, Poland, Spain, etc. The destructive cataclysms of the XX century caused great losses to the architectural heritage. The world community has developed norms and rules that allow for a huge number of implementation options in the context of regional features. The problem of a new construction in the historical environment today is not about the question of whether the object is stylized or modernized. The problem is to determine the principles of interaction of the historical environment with new structures, in the degree of “civility” of a new architecture, the ability of the “new” to further develop the potential of urban space.

**Key words:** contemporary architecture, historical development, architectural and historical environment.

## СУЧАСНА АРХІТЕКТУРА В ІСТОРИЧНІЙ ЗАБУДОВІ (ПОНЯТТЯ ТА ПІДХОДИ)

**Мельник Н. В.**, кандидат архітектури, доцент кафедри дизайну архітектурного середовища  
**Деменко А.Е.**, асистент кафедри дизайну архітектурного середовища  
**Мирец М. Ю.**, студентка Архітектурно-художнього інституту  
*Одеська державна академія будівництва та архітектури*

**Анотація:** Авторами досліджується проблема, пов'язана з архітектурним проектуванням в історичному середовищі. Розглядаються підходи вітчизняних і зарубіжних архітекторів до проблеми. Розвиток як модернізація історичного середовища припускає високий якісний рівень проектних рішень і відповідний рівень втілення архітектури і міського дизайну. При цьому однією з ключових проблем є принцип взаємодії «сучасного» й «історичного». Авторами висвітлюється питання необхідності комплексного підходу до проблеми і вироблення стратегії розвитку.

Досвід Одеси показує негативні результати зволікання в подібних питаннях. Існує світовий, зокрема європейський досвід вирішення проблеми конфлікту «сучасного» й «історичного» в містах Німеччини, Польщі, Іспанії та ін. Проблема нового будівництва в історичному середовищі сьогодні не зводиться до питання: стилізованим або модернізованим буде об'єкт. Проблема полягає у визначенні принципів взаємодії історичного середовища з новими об'єктами.

**Ключові слова:** сучасна архітектура, історична забудова, архітектурно-історичне середовище.

## СОВРЕМЕННАЯ АРХИТЕКТУРА В ИСТОРИЧЕСКОЙ ЗАСТРОЙКЕ (ПОНЯТИЯ И ПОДХОДЫ)

**Мельник Н.В.**, кандидат архитектуры, доцент кафедры дизайна архитектурной среды  
**Деменко А.Э.**, ассистент кафедры дизайна архитектурной среды  
**Мирец М.Ю.**, студентка Архитектурно-художественного института  
*Одесская государственная академия строительства и архитектуры*

**Аннотация:** Авторами исследуется проблема, связанная с архитектурным проектированием в исторической среде.

Рассматриваются подходы отечественных и зарубежных архитекторов к проблеме. Развитие как модернизация исторической среды предполагает высокий качественный уровень проектных решений и соответствующий уровень воплощения архитектуры и городского дизайна. При этом одной из ключевых проблем является принцип взаимодействия «современного» и «исторического». Авторами освещается вопрос необходимости комплексного подхода к проблеме и выработке стратегии развития. Опыт Одессы показывает негативные результаты промедления в подобных вопросах.

Существует мировой, в частности европейский опыт решения проблемы конфликта «современного» и «исторического» в городах Германии, Польши, Испании и др. Проблема нового строительства в исторической среде сегодня не сводится к вопросу: стилизованным или модернизированным будет объект. Проблема заключается в определенных принципах взаимодействия исторической среды с новыми объектами.

**Ключевые слова:** современная архитектура, историческая застройка, архитектурно-историческая среда.

**The purpose** of this article is to study the experience of constructing modern residential and public facilities in the centers of historical cities, the principles of integration of modern aesthetic qualities of architecture and the historical context of the city, the professional approaches to resolving the conflict between “new” and “old” in architecture.

**The urgency of the problem** lies in the growing trend of renovation of the architecture of Ukrainian historical city centres, including the spontaneous construction of new buildings in the historical centre of Odessa. Earlier, in the last third of the XX century, there were some precedents for the placement of discordant new buildings in historical quarters. It was a period when an approach based on the contrast of “modern” and “historical” in architecture (Fig. 1), and on the heightened sense of movement into the future, prevailed. At the beginning of the XXI century, there has been a chaotic approach in Odessa, the absence of constraining factors due to a total violation of ethical norms and design rules in the historical environment (Fig. 2). The spontaneity is determined by the lack of a development strategy for the historical centre. As a result, there is an irreversible loss of the historical appearance of the city. In particular, in Odessa, certain local sections of the city territory within the boundaries of the protected zones of the historical area are being built up without coordinating the main urban planning principles. Developers violate the general morphological principle of the existing infrastructure of the old city. The volumetric-spatial, functional, artistic and aesthetic connections between new facilities and existing buildings are not coordinated. Being, in fact, an example of a city of the European type of the XIX - early XX centuries, today Odessa remains outside the international experience in the development of the city, the protection of architectural and historical heritage.

**Analysis of the previous studies.** Fundamental studies of the philosophical foundations of understanding the city as an urban phenomenon, the problems of preserving and developing the historical environment of cities became relevant in the middle of the XX century. The conceptual framework and scientific problems of the city were developed by such researchers as K. Lynch, A. Ikonnikov, A. Gutnov, M. Gulyanitsky, A. Prutsin, E. Mikhailovsky, A. Shchenkov, L. Pribega, N. Bevz, etc.

Modern Ukrainian scientists investigate the dynamics of changes and the principles of organic interaction of historical and modern elements in the city structure. The subject of the study is the structure and compositional principles of constructing urban planning formations, the principles of adapting facilities of the architectural heritage to the functional requirements of modern life. G. Aleksandrova investigates the problem associated with the morphology of the architectural and historical environment of urban planning formations and the hierarchy of its components [1]. A. Kordunyan develops a method of harmonious proportioning as an architectural and spatial toolkit for the implementation of design ideas within the historical environment [2]. I. Pirozhkova in her scientific studies highlights the issue of urban planning legislation as an element of the environmental law, which is very important for the modern moment, studies the history of the issue [3]. S. Sidorenko studies the problem of synthesis of modern and historical architecture from the point of view of the principles of their combination in the urban environment, revealing the methods of environmental adaptation of new buildings to the historical context [4]. Yu. Kharaborskaya investigates the processes of renewal of the urban tissue, its restructuring according to the modern problems of society [5]. I. Khudyakov has a practical experience of designing in the historical development of Odessa, and in his scientific works he studies changes in the architectural landscape of the city and the destructive nature of the eclectic approach of modern architecture [6].

**The subject** of the study is the principles and approaches to the design of new facilities in the conditions of a historical city.

**The work objectives:**

- to review the previous scientific studies on the topic;
- to determine the priority directions in the activities of international organizations and the results of international conferences;

- to identify the basic concepts and terms;
- to consider the experience and private approaches to preserving the architectural heritage of cities in the context of the development of modern architecture;

**The statement of basic materials.** The international community is united by the understanding of the need to unite efforts on the issues related to the dynamics of structural changes in historical cities. Since the 30s of the XX century, international conferences have been held, program documents on the development of cities and urban communities have been adopted. Each subsequent document, in fact, supplements and develops the previous ones, as there is a dynamics of factors influencing the social, ethnic, and general cultural aspects of the urban population. For example, the Athens Charter was finally formulated in 1933; over the years, the result of the implementation of its ideas showed the negative sides and excessive rigidity of the use of templates in urban planning, the lost appearance of historical city centres. One of the key problems of the city is clear from the text of the charter - free territories are always insufficient [7].

One of the outstanding international documents that offers a new qualitative approach to the architectural heritage of historical cities at the beginning of the XXI century is the Vienna Memorandum [8]. The capital of Austria has several historical and architectural layers that reflect different historical eras and at the same time is a dynamically developing urbanized space. Vienna is an example of a systematic approach to the problem of the development of a historical centre, the search of a balance in the issues of preserving the architectural heritage and modern urban design (Fig. 3). The Vienna Memorandum is the result of work of the International Conference on the Preservation of the World Heritage and the Management of Modern Architecture, which took place from 12 to 14 May 2005 in Vienna (Austria) under the patronage of the UNESCO.



Fig. 1. The residential building on Bazarna Street in Odessa built in the 70s has influenced the perception of the entire historical quarter



Fig. 2. The residential building on Frantsuzkyi Boulevard in Odessa was built in 2010s in close proximity to the architectural monument – the XIX century mansion, 37 Frantsuzkyi Boulevard





Fig. 3. A new building of the Topaz Hotel in the historical center of Vienna, 2010-2012



Fig. 4. The Guggenheim Museum in Bilbao by architect Frank Gehry

The essential aspects of the Vienna Memorandum are:

1. An integration approach.
2. Attention to the processes of influence of modern architecture on the *landscape* of a historical city.
3. The choice of the term “*historical urban landscape*” as a priority term for the preservation of cultural heritage; the term represents a broader concept than others previously used (“historical centre”, “ensemble” and others).

Today, the more important issue is the environmental approach to the protection of architectural heritage. The Ukrainian scientist, Leonid Pribega, in his scientific studies focuses on the historical environment as a category of protection; his approach is to determine the components of the environment. “We should identify the elements of the frame as the most resistant layer. For the urban planning organism, these are the landscape conditions of the territory and the planning structure. It is also necessary to diagnose the state of the integrity of the frame filling, namely the development, to determine what influence this or that component or the interaction of components have on the image of a particular city” [9, p. 179].

Several examples can be provided as a private view of the solution to the problem of “new” and “old” in the architecture of the historical environment. The English critic, Arthur Edwards, defines the quality of the issue solution as a “rude” and “polite” attitude. He considers such facilities as the building of the Guggenheim Museum in Bilbao by the architect Frank Gehry (Fig. 4) and the house of arts in the city of Graz in Austria by the architect Peter Cook (Fig. 5) to be a “rude” attitude to the historical context.



Fig. 5. The House of Arts in Graz, Austria, by architect Peter Cook



Fig. 6. The project of the National Museum of Denmark in Helsingør by the architectural bureau BIG



Fig. 7. The Museum of Architectural Drawing in Berlin. General appearance

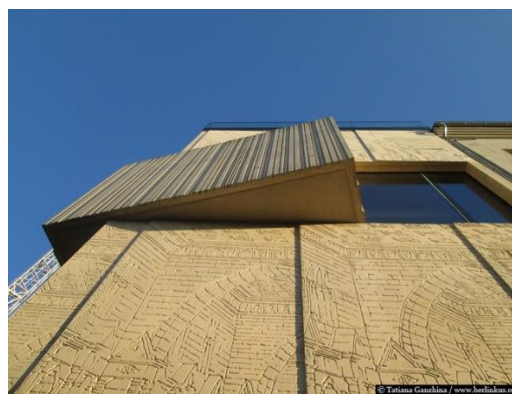


Fig. 8. The Museum of Architectural Drawing in Berlin. Fragment

Edwards calls the project of the National Museum of Denmark in Helsingor by the architectural bureau BIG as a “polite” attitude, where the new facility does not interfere with the visual perception of the historical and architectural landscape (Fig. 6). Arthur Edwards considers it an unacceptable approach to suppress the historical environment with new facilities dominating in scale and style.

Sergei Tchoban, a managing partner of the SPEECH bureau, the head of the Berlin office of “nps tchoban voss”, deals with the issues of modern development of the urban environment of cities in Russia and Europe. In his opinion, the facilities of modern architecture in the historical environment are becoming more laconic and pragmatic in form, while more accurate in details [10]. The architect Tchoban is the author of the building of the Museum of Architectural Drawing in Berlin. The Museum of Architectural Drawing is intended to place and display the collections of the Sergei Tchoban Foundation. The modern museum is located on the former site of the factory garage with factory buildings in the neighbourhood built at the beginning of the 20<sup>th</sup> century in a pseudo-Gothic style (Fig. 8).

Michael Davis identifies five main approaches to solving the issue of integrating new architectural sites into the historical tissue of the city: style imitation, traditional, sophisticated, modern, and proud. Each approach accordingly emphasizes a priority aspect in relation to the historical heritage. The author considers the “sophisticated approach” the most tolerant.

In contemporary research, special attention is devoted to the contextual method as a way of interaction between a new object and the historical environment as a whole or between individual buildings as part of an ensemble of different times. Architectural science studies both policy approaches and particular methods of their implementation. S. Zavarikhin generalizes the experience of contextualism as a method that has been applied throughout the history of architecture and defines three formed types: passive, active, and compromise. A. Zaitsev identifies eight particular methods of adapting architectural sites in the current historical environment: compositional, architectural and tectonic, stylized, regional, ornamental and decorative, structural and morphological, figurative and symbolic, and typological.

Investigating the problem of the architecture development in historical cities, the following conclusions can be drawn.

Urban development of most modern cities is a sequence of the stages of extensive and intensive development, the periods of agglomerations forming. The problem of the architectural heritage has a historical aspect, which determines the moral and ethical, economic, scientific and research tasks of its solution. Theoretical research and practical experience show a variety of approaches based on both general cultural values and architectural traditions and regional specific features.

The problem of the architecture development in the historical centres of modern cities in Ukraine and, in particular, of Odessa is complex. It includes the financial and economic aspect, the problem of imperfect mechanisms for working out a development strategy, the consequence of which is the limitation of the experience of using various approaches and methods for solving the problem.

## LITERATURE

1. Halyna Aleksandrova (Kyiv). To the problem of morphological analysis of the architectural and historical environment of urban planning formations [Electronic source] - Available at: [http://dspace.nbuv.gov.ua/bitstream/handle/123456789/16942/36\\_Aleksandrova.pdf?sequence=1](http://dspace.nbuv.gov.ua/bitstream/handle/123456789/16942/36_Aleksandrova.pdf?sequence=1) (accessed on 10.09.18).
2. Kordunian O.P. Principles of proportioning in architectural types of public buildings and structures of Ukraine: extended abstract of a thesis for a Candidate Degree in Architecture: 18.00.02 – architecture of buildings and structures. Lviv Polytechnic National University. [Electronic source] - Available at: <http://library.nuft.edu.ua/ebook/file/kordynyan18.00.02.pdf> (accessed on 12.05.20).
3. Pirozhkova I.G. Urban planning legislation of the Russian Empire as an element of environmental law. [Electronic source] - Available at: <https://www.gramota.net/materials/3/2013/4-2/34.html> (accessed on 22.04.20).
4. Contemporary architecture in historical development. Sydorenko S. // International Scientific Journal “Innovative Science” No. 02-2/2017 ISSN 2410-6070 p.-239-242. [Electronic source] - Available at: [cyberleninka.ru › sovremennaya-arhitektura-v-istoricheskoy-zastroyke](http://cyberleninka.ru/sovremennaya-arhitektura-v-istoricheskoy-zastroyke) (accessed on 28.03.20).
5. Kharaborska Yu., Sushko P. Some features of constructing new objects in the historical environment (on the example of Kyiv) // Modern problems of architecture and urban planning. Scientific and technical collected volume. - Issue 42.2016.- p.126-136.
6. Khudiakov I.A. ECLECTICISM IN THE CONTEMPORARY ARCHITECTURE OF ODESSA // Problems of the theory and history of architecture of Ukraine. [Electronic source] - Available at: [file:///C:/Users/Admin/Downloads/prtiau\\_2017\\_17\\_10.pdf](file:///C:/Users/Admin/Downloads/prtiau_2017_17_10.pdf) (accessed on 14.05.20).
7. The Athens Charter. Dictionary of architecture. [Electronic source] - Available at: <https://architect.academic.ru/386> (accessed on 05.06.20).
8. “World Heritage and Contemporary Architecture – Managing the Historic Urban Landscape” (Vienna Memorandum). [Electronic source] - Available at: [old.centre7.org.ua › junesko-88](http://old.centre7.org.ua/junesko-88) (accessed on 12.06.20).
9. Historical environment as a monument protection category [Text] / L. Prybieha // Ukrainian Academy of Arts: Research and methodological works / Ministry of Culture and Arts of Ukraine; National Academy of Visual Arts and Architecture. — Kyiv, 2004. — P. 177-185.
10. Choban S. Contemporary architecture in the context of historical development. [Electronic source] - Available at: <https://www.speech.su/ru/projects/muzej-arhitekturnogo-risunka> (accessed on 15.06.20).
11. Zaitsev A.A. Contextualism as a stylistic tendency in architecture of the late XX - early XXI centuries: thesis for a Candidate Degree in Architecture: 05.23.20 - Theory and history of architecture, restoration and reconstruction of the historical and architectural heritage: Nizhny Novgorod State University of Architecture and Civil Engineering. Nizhny Novgorod, 2013. – 175 p. [Electronic source] - Available at: <https://www.dissercat.com/content/kontekstualizm-kak-stilisticheskoe-techenie-v-arkhitecture-kontsa-xx-nachala-xxi-vv> (accessed on 02.06.20).



12. Vienna: about how to combine the historical heritage and the need for urban development [Electronic source] - Available at: <https://reherit.org.ua/material/viden-yak-poyednuvaty-istorychnu-spadshhynu-ta-potrebu-v-miskomu-rozvytku/> (accessed on 06.05.20).
13. Rychka Yu. Bilbao. The Guggenheim Museum. About how contemporary art saved the economics [Electronic source] - Available at: <tps://day.kyiv.ua/uk/article/podorozhi/bilbao-muzey-guggenhayma> (accessed on 06.05.20).
14. Graz is an architectural time machine. [Electronic source] - Available at: <https://ukrainiantime.org/uk/article/grats-arkhitekturna-mashyna-chasu> 09.05.20 / 06:41 (accessed on 20.06.20).
15. Danish National Maritime Museum © Rasmus Hjortsh [Electronic source] - Available at: <https://archi.ru/projects/world/8340/datskii-nacionalnyi-morskoi-muzei> (accessed on 20.06.20).