INTEGRATION OF MODERN ARCHITECTURE IN THE DEVELOPMENT OF HISTORICAL MAHALLAS

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Abstract: This thesis examines the scientific and practical criteria for integrating modern architecture into historical mahallas. The study analyzes contextual compatibility, scale and silhouette, harmony of materials, quality of public spaces, and needs related to the local way of life. From an academic perspective, the impact of modern architecture on the historical environment, approaches based on the principles of cultural heritage preservation, and sustainable development are considered.

Keywords: historical mahalla, integration, context, scale, public space, adaptive planning, materials

TARIXIY MAHALLALARNI RIVOJLANTIRISHDA ZAMONAVIY ARXITEKTURANI INTEGRATSIYA QILISH

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Annotatsiya: Mazkur tezis tarixiy mahallalarda zamonaviy arxitekturani integratsiya qilishning ilmiy-amaliy mezonlari yoritilgan. Kontekstga moslik, masshtab va siluet, materiallar uyg'unligi, jamoat makonlari sifati hamda mahalliy turmush tarzi bilan bog'liq ehtiyojlar tahlil qilinadi. Zamonaviy arxitekturaning tarixiy muhitga ta'siri, madaniy merosni muhofaza qilish va barqaror rivojlanish tamoyillari asosidagi yondashuvlarni ilmiy nuqtai nazardan ko'rib chiqilgan.

Kalit so'zlar: tarixiy mahalla, integratsiya, kontekst, masshtab, jamoat makoni, adaptiv rejalashtirish, materiallar

Introduction

One of the most fascinating aspects of the history of Eastern countries is urban life and the history of cities. For every nation, historical and cultural monuments are not only a source of national wealth and pride but also an important tourism resource. Many architectural monuments, pilgrimage sites, historical buildings, and mahallas serve as tourist attractions. Historical cities, shaped over long development processes, maintain a direct connection to their past and are reflected in the everyday lives of urban residents. Historical mahallas are places that embody the cultural, architectural, and spiritual heritage of the people. They represent not only architectural forms but also social structures and traditional lifestyles. At the same time, due to globalization and urbanization processes, the demand for modern infrastructure in these areas has been steadily increasing.

Main Part. The study of the history of Central Asian cities (Bukhara, Samarkand, Khorezm, Tashkent) in the late 19th and early 20th centuries reveals that they were characterized by a distinctive division into separate residential mahallas. Archaeologists often used the term "mahalla" conditionally, referring to quadrangular residential blocks bounded by streets defined by excavation lines or natural relief. It is well known that many cities in Central Asia were

divided into two or four parts, a practice that remained relevant until the early 20th century. Alongside this division, the traditional subdivision of cities (and large villages) into small cells—residential mahallas—was preserved. In many cities, mahallas remained intact until the pre-revolutionary period but began to disappear during large-scale urban redevelopment.

Historical mahallas represent a complex system within the urban structure, encompassing not only ancient layers of planning but also social relationships, everyday life, and construction traditions adapted to the environment. Therefore, in addressing their development, the priority should not be a choice between "preservation" and "renewal," but rather a balanced concept of integration.

UNESCO's recommendations on the Historic Urban Landscape emphasize that heritage should be considered not as isolated objects, but in conjunction with landscape, visual silhouette, infrastructure, social practices, and economic activities [1]. This approach is particularly relevant for "living heritage" environments such as mahallas. When modern architectural elements are introduced, their value should be measured not merely by aesthetic renewal, but by their ability to enhance comfort without disrupting existing spatial and cultural mechanisms. Thus, the goal of integration is neither imitation nor sharp contrast, but the creation of context-sensitive, legible architectural solutions that avoid irreversible losses.

The first criterion for integrating modern architecture into historical mahallas is contextual and scale discipline. **Kevin Lynch**, an American urban planner, demonstrated that elements shaping the image of a city—paths, edges, nodes, landmarks—are perceived through human cognition [2]. In the mahalla structure, narrow streets, turns, inner courtyard systems, passageways, and small-scale public nodes (small shops, teahouses, gathering points near stops) form the spatial organization mechanism. Disproportionate building heights relative to street width, smooth and large-module façade rhythms, and aggressive lighting or advertising elements can overwhelm the mahalla scale and visually erase the historical layer. Therefore, integration practices require height gradation, preservation of street silhouettes, adaptation of façade elements to smaller forms, and functional connections between entrance streets and active mahalla routes.

The second criterion is the harmony of materials and technologies—following the principle of "compatible difference" rather than "uniform appearance." **Aldo Rossi**, an Italian architect, interpreted the city as a system of artifacts connected to collective memory and argued that new architecture should engage in dialogue with the historical environment without obscuring its meaning through false historicization [3]. In the context of a mahalla, this means that modern additions do not need to replicate traditional ornamentation, but should adapt to existing forms through color palettes, textures, shadow depth, window-door proportions, and rooflines. Even when materials such as energy-efficient glazing, ventilated façades, or composite panels are used, limiting glossy surfaces, choosing natural color tones, and subdividing façades into smaller perceptible segments can ensure visual compatibility. Importantly, technology should not negate the mahalla's climate-adaptive experience: canopies, verandas, courtyard ventilation, and microclimate-supporting solutions must work in harmony with modern standards.

The third criterion concerns the quality of public facilities and pedestrian priority. Mahalla development is often determined not by individual objects but by the spaces between inside and outside: doorsteps, pathways, small service points, and green elements along streets that bring people together and encourage interaction. **Jane Jacobs**, an American-Canadian urbanist, emphasized that urban vitality depends on street life, mixed functions, and the principle of "eyes on the street" [4]. This idea becomes a practical guideline for modern architecture integrated into historical mahallas: ground floors should not become "blind" walls; service and public functions should open toward the street, creating activity and movement. Entrances must be safe and legible, while traffic flow should not displace pedestrian movement. Modern solutions (inclusive ramps, lighting, drainage, non-slip paving, small architectural forms) modernize the mahalla

environment without disrupting its social model. During reconstruction, it is especially important not to eliminate informal meeting points along streets, but rather to reorganize them in an orderly and comfortable manner.

The fourth criterion is an adaptive model of planning and management. Historical mahallas often simultaneously accommodate residential life, small services, crafts, internal logistics, and tourism-related demands. Therefore, comprehensive renewal through a single large project often increases social and economic risks. Within the framework of Uzbekistan's urban planning regulations, phased planning requirements for reconstruction, new construction placement, infrastructure upgrades, landscaping, and fire safety in historical areas serve as an important foundation [5]. From a practical standpoint, phased renewal is the most effective approach: first, engineering networks (water, sewage, electricity), then public spaces and pedestrian routes, followed by the repair of individual housing and regulation of extensions. This sequence minimizes damage to the historical environment and prevents population displacement and social disruption.

The fifth criterion is scientifically grounded restoration and clear differentiation of new additions—the principle of authenticity. **Aleksey Serafimovich Shchenkov**, a representative of the Russian school of restoration, emphasizes the following principles in restoring historical environments:

– scientific validity-based restoration work on factual research;
– careful treatment, preserving the original state and cultural characteristics of a site or building;
– identification of new interventions, clearly distinguishing modernization or additions within the historical context [6].

This approach opposes falsification of historical layers by disguising the "new" as "old." In practice, new volumes (such as additional floors, attic extensions, or small public pavilions) should follow the compositional rules of historical structures while openly expressing their modern character through simpler lines, neutral materials, and minimal yet high-quality details. In this way, the memory of the mahalla is preserved while a functional layer responding to contemporary needs is created.

Conclusion Based on the criteria discussed above, the following recommendations for integrating modern architecture into the development of historical mahallas can be summarized:

- contextual regulation of height and façade rhythm;
- integration of climate-responsive passive solutions with energy efficiency;
- active ground-floor frontages and pedestrian-priority street design;
- phased reconstruction and infrastructure modernization;
- scientific validity in restoration and honest expression of new additions.

Thus, integration should not aim to "museumify" the historical mahalla, but rather to strengthen its livability. Modern architecture becomes a tool for enhancing comfort, safety, and spatial quality without displacing the mahalla's identity and uniqueness.

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