УДК №726.03

FACADES OF ARCHITECTURAL MONUMENTS OF CENTRAL ASIA OF THE 7TH–8TH CENTURIES: CONSTRUCTIVE AND DECORATIVE ANALYSIS

Salokhutdinova Munavvar
doctoral student (PhD) SamSUAC//
salokhutdinova@gmail.com

O‘RTA OSIYO VII–VIII ASRLAR ME’MORIY YODIKLARI FASADLARI: KONSTRUKTIV-DEKORATİV TAHLILI

Saloxutdinova Munavvar
SamDAQU doktoranti (PhD). //
salokhutdinova@gmail.com

ФАСАДЫ ПАМЯТНИКОВ АРХИТЕКТУРЫ СРЕДНЕЙ АЗИИ VII–VIII ВВ.: КОНСТРУКТИВНО-ДЕКОРАТИВНЫЙ АНАЛИЗ

Салохутдинова Мунаввар
докторант (PhD) СамГАСУ//
salokhutdinova@gmail.com

Abstract. *This article analyzes the facades of architectural monuments in Central Asia from the 7th–8th centuries. It examines structural elements, decorative techniques (aiwans, friezes, battlements), materials (pakhsa, brick, wood), and iconographic motifs. Regional features of the architectural schools of Penjikent, Merv are highlighted. The facade is explored as an expressive and symbolically rich element reflecting the cultural and artistic traditions of the era.*

Annotatsiya.*Ushbu maqolada Markaziy Osiyoning VII–VIII asrlarga oid me’moriy yodgorliklari fasadlari tahlil qilinadi. Unda konstruktiv elementlar, bezak usullari (ayvonlar, frizlar, tishli bezaklar), materiallar (paxsa, g‘isht, yog‘och) va ikonografik motivlar ko‘rib chiqiladi. Panjikent, Merv me’morlik maktablariga xos mintaqaviy xususiyatlar alohida ta’kidlanadi. Fasad davr madaniy va badiiy an’analarini aks ettiruvchi ifodali va ramziy jihatdan boy element sifatida o‘rganiladi.*

Аннотация. *Статья посвящена анализу фасадов памятников архитектуры Средней Азии VII–VIII вв. Рассматриваются конструктивные элементы, декоративные приёмы (айваны, фризы, зубцы), материалы (пахса, кирпич, дерево) и иконографические мотивы. Отмечены региональные особенности архитектурных школ Пенджикента, Мерва, Семиречья. Фасад*

исследуется как выразительный и символически насыщенный элемент, отражающий культурные и художественные традиции эпохи.

Keywords: *7th–8th centuries, facade, decorative elements, pakhsa, mud brick, aivan, frieze, iconography, Penjikent*

Kalit so‘zlar: *VII–VIII asrlar, fasad, bezak elementlari, paxsa, hom g‘isht, ayvon, friz, ikonografiya, Penjikent*

Ключевые слова*: VII–VIII века, фасад, декоративные элементы, пахса, сырцовый кирпич, айван, фриз, иконография, Пенджикент*

Introduction.The period of VII-VIII centuries in the history of Central Asia is marked not only by the flourishing of artistic culture, but also by the formation of stable principles in architecture. Of particular interest to the researcher are the facades of monuments of this time, which expressively combine structural solutions, decorative richness and symbolic content. The article describes various methods of research of facades of architectural constructions of Central Asia of VII-VIII centuries, based mainly on archaeological excavations, architectural analysis and comparison of structural features.

Literature review.

Research Methodology. One of the main methods is archaeological uncovering of residential and cult complexes such as ancient Penjikent, Aul Tepe, Ak Beshim, where the layout of buildings, elements of facades, decorative forms, as well as used construction materials were thoroughly studied. An important role is played by facade reconstructions based on fragments of architectural decoration, paintings, ornaments and structural remains. Special attention is paid to analysing decorative elements of the facades, such as figurative bricks, dentils, wooden columns and carved ornamentation, which allow us to judge the aesthetics and symbolism of facade architecture. Comparative methods are also used, comparing the forms and styles of façades in different regions of Central Asia, which helps to identify regional peculiarities (e.g. ornamentation in Semirechye and Khorezm).

Literary review. The study of architectural facades of Central Asian monuments from the 7th to 8th centuries has been greatly enriched by modern scholarly works that reveal both structural and decorative nuances in the design of monuments from this period. Volichenko and Raid (2024) present a modern in-depth analysis of the Central Asian 'brick style', emphasising its roots going back to earlier pre-Islamic periods, including the seventh to eighth centuries. The authors convincingly argue that decorative brickwork originally arose out of structural needs, when ornamentation was directly linked to the structural joints of masonry, reflecting an organic unity of form and function in façade solutions. A fundamental historical study by Denik (1939) offers a comprehensive study of architectural ornamentation throughout Central Asia,

cataloguing and systematising decorative elements. Denik notes the continuity of ornamental motifs and methods, linking the decorative traditions of the early medieval period with subsequent stylistic changes. His work remains the most important reference point for the identification and classification of façade decorations of the 7th to 8th centuries. An important structural and decorative element of this period - vertical reliefs ("corrugations") - is studied in detail by Khmelnitsky. His analysis shows how these elements simultaneously fulfilled constructive and aesthetic functions, emphasising verticality and contributing to both visual and structural integrity (Khmelnitsky, 2000). Such elements are widely represented in the monuments of Merv, Bukhara and Khorezm, revealing common architectural practices of different cultural centres of Central Asia.

Analyses and results. Analyses of masonry walls (pachsa, raw brick, combined methods) help to establish the technological methods and the structural stability of the facades. In addition, descriptions from written sources (e.g. Arabic chronicles) help to reconstruct the general appearance of the facades of public buildings, palaces and temples. Together, these methods create a comprehensive picture of the development of façade architecture in the region and its cultural significance during this period. This period can be regarded as an early stage in the formation of the classical architectural tradition of Central Asia. Functional and decorative nature of the façade: The architectural façade in the VII-VIII centuries fulfilled not only utilitarian and defensive tasks, but also served as a visual expression of the public and religious status of the building. In cult, residential and defensive buildings, facades became carriers of symbolic meanings and an active means of artistic expression. The facades of monuments of this period combined defensive, cultic and aesthetic functions. Architects strived for expressiveness through:

- division of the plane by friezes;
- decorative endings (dentils, half-domes);
- the use of painting, sculpture and carving on the front part of the courtyard buildings.

Composition and façade elements.The layout and façade solutions of buildings were strictly related to their function. In residential architecture, for example, aivans (open porticoes on columns), loggias and half-domes accentuating the entrance group were widely used. In cult architecture, the facade included porticoes, carved panels and picturesque compositions. One of the characteristic features was the active use of friezes and dentils crowning the façade. Teeth made of shaped bricks (round, stepped, wave-shaped) emphasised the defensive character of the building and at the same time played a decorative role. Sculptural elements, painting, wood and clay carving were often used in the facade solutions of castles and temples. Materials and technologies. The main building materials of facades of that time were pahsa (beaten clay), raw and burnt bricks. Pahsa was used mainly for the construction of solid walls, while

decorative elements were often made of burnt bricks, wood, and clay. It is important to note the organic combination of constructive reliability and decorative expressiveness. [1]



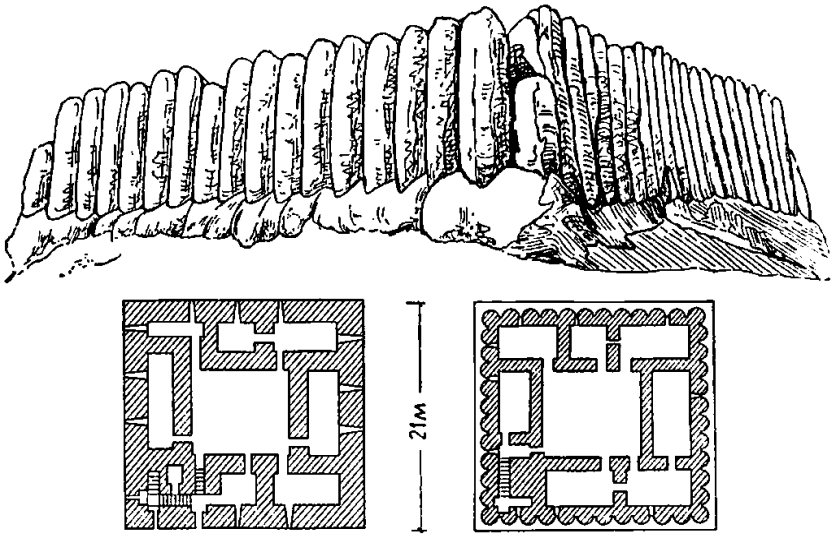

Fig.(1) Fig(2)

Fig.(1) Ancient Penjikent. Naus. Reconstruction

Fig(2) Ancient Merv. Big Kyz-Kala (general view) and Small Kyz-Kala (floor plans)

A peculiarity of the eastern and central regions of Central Asia (Semirechye, Chach) are the friezes and dentils of shaped bricks crowning the facade of the castle. The shape of bricks is approximately the same everywhere - round, stepped, wavy. Wall paintings and monuments of applied art supplement the idea of early medieval castles with such details as covered wooden balconies, lattices and wooden imposts in the openings.

Regional differences.The façade architecture of Central Asia shows local peculiarities. In Semirechye and Chach, serrated friezes of shaped bricks are common,

while in Penjikent the architecture is oriented towards rich painting and sculptural forms. Merv monuments demonstrate monumentality and austerity achieved through massive platforms and enclosed courtyards. Iconography and symbolism.The facade of religious buildings functioned as a mediator between sacred space and the environment. The painting of porticos, sculptures in niches, and the design of entrance portals served as a means of visual communication, drawing the viewer into the ritual space. This is especially expressive in the temples of ancient Penjikent, where the facades were saturated with images of local deities and mythological scenes.[2].

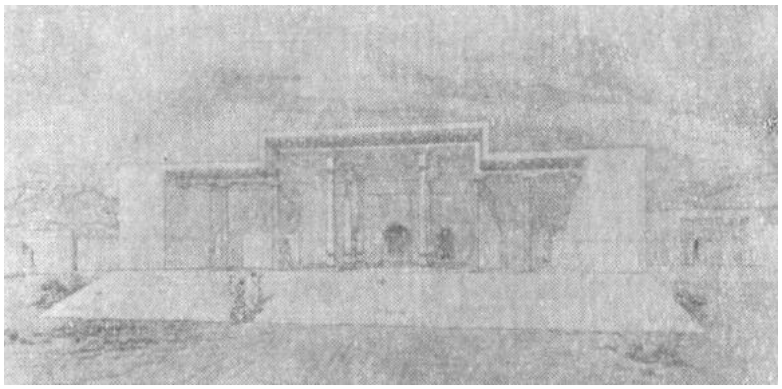

Fig 3. Ancient Penjikent. Temple. Reconstruction

The facades of buildings in early medieval Central Asia were characterised by structural rationality and decorative expressiveness, reflecting the maturity of the architectural tradition of this period. The main material for facades was pakhsa and raw brick, which were plastered with clay with an admixture of adobe. For better adhesion of the plaster to the surface of the pakhsa, the walls were notched. One of the characteristic features of facades was the presence of half-domes in niches resting on trompe l'oeil, which gave plasticity and volume to the appearance of buildings. In the buildings of Penjikent, for example, such facade niches were often crowned with half-dome coverings, emphasising important elements of architectural decoration. (Fig. 3.)The geometry of the arches and vaults on the facades testifies to the architects' mastery of the laws of proportion: the curves of the arches were inscribed in rectangles with an aspect ratio of 3:4, which corresponds to the "Egyptian triangle" and emphasises the mathematical approach to shaping. Wooden columns with richly ornamented capitals, abacuses and pedestals were also an important detail of the facade decoration. These elements were executed with symbolic meaning - the spherical or jug-shaped shape of the column base, called "kuza", was an allegory of a vessel of fertility, from which leaves and flowers, reproduced in the carving of the capitals, grew. The abaca was decorated with carved modulons at the corners, which gave the facades not only aesthetic but also ideological content. Thus, the facade architecture of this period combined constructive thoughtfulness, the use of local materials and expressive decorative language, reflecting the symbolism and artistic preferences of Central Asian culture.[1, p195].

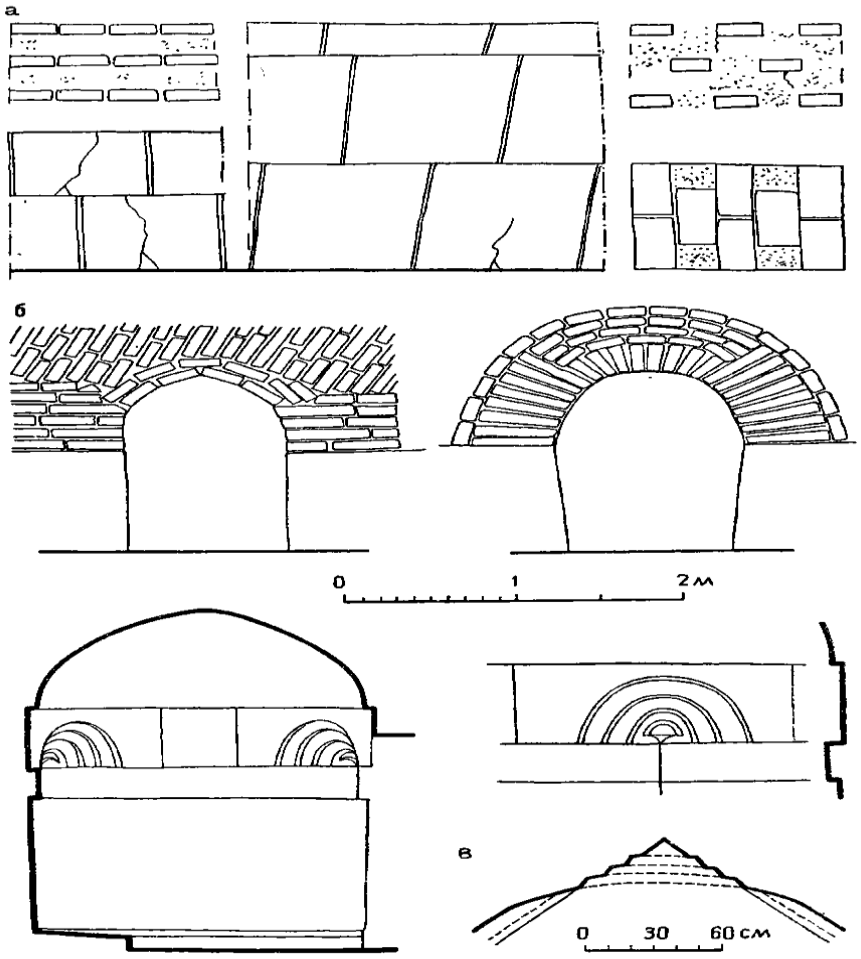

Figure 4. Structures

a - masonry walls (pahsa - beaten clay and combined clay and raw masonry);
b - arches; c - domed room

In Khorezm, trapezoidal raw material was used for vaults, in the eastern regions - ordinary rectangular raw material with joints filled with specially moulded wedges. The raw material of the arches was laid interlocked. The arcs of the vault could be steep, inclined or even curved, which facilitated masonry. In case of steep arcs, the raw material itself could be laid obliquely. To reduce the span, several horizontal rows of masonry were laid at the heels of the vault, which formed a 5-6 cm overhang at the base. The span of raw material vaults reached 4-5 metres. The ramps were always vaulted, with the arcs of the vault sloping towards the floor and the heel descending in steps. The grooves were filled with raw material or scrap, clay, loose earth, sometimes covered with half a vault without filling.

There are several methods of arch masonry techniques: wedge masonry; transverse sections; overlapping; flat masonry in several rolls. This variety is probably caused by the mismatch between the size of the narrow span and the large format of the raw material.

The masonry by transverse sections is typical for Khorezm; but an arch can be built in two rolls - by transverse sections in the inner row and by wedge masonry in the outer row.

Arches, as well as vaults, are divided according to their profile into: multi-centred - high and low; beam arches; triangular arches - made of angled bricks; combined arches, where curves are conjugated at an angle (Fig. 4). The multi-centred ones are subdivided into three- and five-centred ones. In the arches of such profile the shoulder and crowning parts are structurally differentiated. The parts of the curve within the lower radii are often formed by a different masonry method than the upper part. This is logical because the performance of the structure in these sections is unequal. Thus, the different masonry types and arches are integral parts of façades and influence the human perception of the façade

Features of facades of religious buildings:

1. In the temples of Penjikent:

- Portico along the facade, bounded by antebellum walls.
- Painting on the walls of the portico.
- The panel at the main gate was decorated with clay relief.

2. In the Buddhist temples of Ak-Beshim (Chui Valley):

- Rectangular hall with eight-column support.
- A cella with a bypass corridor.
- Clay sculptures of Buddhas were placed on the facade.
- Residential and palace buildings:

1.The house of the aristocracy of Penjikent:

- The entrance is decorated with an iwan or loggia with a half dome.
- Aivans are open galleries on facades covered with a canopy on columns.

1. In the castle of the ruler of Bunjikat:

- Parade hall with loggia on the facade.
- The architecture was characterised by elegance and rich ceiling decoration.

2. At Kyz-Kala (Merv):

- Earthen platforms, rectangular facades.
- Possibly domed courtyards, which influenced the architecture of the outer walls.

Conclusion

Facades of architectural monuments of Central Asia of the VII-VIII centuries represent a complex synthesis of constructive logic and artistic expressiveness. They reflect the level of technical skill, the depth of aesthetic perceptions and the richness of cultural influences. These facades not only determine the external appearance of buildings, but also form the cultural identity of the region, becoming the most important artefacts of architectural heritage. Thus, analysing the facades of the period under consideration allows us to gain a deeper understanding of the evolution of

architectural form and express the significance of early medieval Central Asia in the context of world architectural history.

List of references used:

1. General History of Architecture in 12 volumes / State Committee for Civil Engineering and Architecture under the USSR Gosstroy, Research Institute of Theory, History and Perspective Problems of Soviet Architecture. - Leningrad ; Moscow : Publishing house of construction literature, 1966-1977.
2. Vol. 8 : Architecture of the Mediterranean, African and Asian countries. VI-XIX centuries / Edited by Y. S. Yaralov (executive editor), B. V. Weimarn, V. A. Lavrov, A. M. Pribytkova, M. A. Useinov, O. H. Khalpakhchyan. - 1969. - 491 p., ill.
1. ARCHITECTURE of Central Asia VI-VIII centuries / V. L. Voronina. - C. 183-197.
3. Filanovich M.I. Interaction of elite subcultures of Sogd and Chacha in the early Middle Ages // The role of the city of Samarkand in the history of world cultural development. Materials of the International Scientific Seminar devoted to the 2750th anniversary of the city of Samarkand. - Tashkent - Samarkand, 2007.
4. 21. Khozhaniyazov G. Malaya Kyrkkyzkala - ancient settlement of early antique Khorezm// Archeology of the Aral Sea region, 1990. - Vol. IV.
5. 22. Khmelnitsky S. Between Kushans and Arabs. Architecture of Central Asia V-VIII centuries. - Berlin - Riga, 2000.