

Renaissance Architecture in Central Asia

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Abstract: The article provides information about the architecture of the renaissance period in Central Asia, the role of architecture in the construction of buildings, historical styles of architecture, constructive solutions of buildings, buildings and structures in khanates and their architectural solutions.

Key words: acanthus leaves, minarets, madrasahs, mud bricks, domes, pediments, Decorative finishing, tiling.

Central Asia is one of the ancient countries and consisted of a union of several states. Bactria (a part of which included the Surkhandarya region) in the VI-VIII centuries BC. Sughd (between the Kashkadarya-Zarafshan-Syrdarya rivers), Khorezmiya (the lower reaches of Amudarya and Syrdarya), Parkana (Fargona valley) - these were the formed regions of the ancient Central Asian civilization. In the 1st millennium BC, real cities such as Bactria, Sughd, and Khorezm began to emerge. They have a right-angled or circular shape with semi-circular towers and wall passages, many tunnels for archers and archers, reinforced with tile walls (Kyzil Tepa, Bandikhon, Talashan - all in Surkhandarya region); all these cities had a fortress and a separate administrative government complex, and behind the wall it was possible to provide shelter and protection to the inhabitants of the city in the days of dangerous military operations. There are special fortresses in the villages. In the 4th century BC, the troops of Alexander the Great faced such cities and took them by attack. The influence of Hellenism in architecture is relatively more evident in Bactria - in other regions it is not so noticeable. The role of Hellenism - here Greek - is reflected in the application of Ionic and Korinor columns (but gradually with radical reworking), the use of elements such as optical bases of columns, acanthus leaves, palmintas, and cherypitza antefixes with an embroidered edge [1,2,3].

Among the high examples of ancient architecture, the three-towered palace of the Khagans of Khorezm is often distinguished by its large halls and rooms. Excavations in Afrosiyab, Variksha (Bukhara region), Panzhikent (Tajikistan) show that residential constructions are mixed. The houses have 2-3 floors, are decorated with rich wall paintings and wooden carvings in pictorial and decorative methods, and the part intended for living and marriage, the reception area, and the hotel part stand out.

At the beginning of the 6th century, as a result of the unification of the Arab tribes under the banner of Islam, it gained great power and conquered all the neighboring countries. The Muslim religion encourages Muslims to worship one God. The Arab caliphate began to instill its culture in the lands it conquered. During these times, the culture and architecture of Central Asia was depressed for a certain period of time. In the 9th-10th centuries, during the Samonian dynasty, the feudal city began to develop cultural and trade relations with other countries, crafts and architecture [4,5].

After the Arab soldiers conquered the cities of Central Asia, the land people who lived in the Kalkha in the center of the city and in its front part settled in the place where there are no Arabs and continued their profession. The entire city, including this part of the city, began to be surrounded by stone walls. During this period, cities did not have a standard city plan. The city plan began to develop depending on the conditions of this land, therefore, the plan of Bukhara, Samarkand, Tashkent and other Central Asian cities is not similar to each other, in the cities, palace administrative buildings were built in the central squares (Registan). The central streets of the city go from the city gates to the market. The streets are named after the professions where the artisans are located. New commercial buildings (timlars, vines, chorsu), caravanserais, warehouses began to appear. Gardens and palaces of the rich and rulers are located on the outskirts of the city.

The adoption of Islam in Central Asia and its conversion into a faith for the people of the land led to the construction of mosques and madrassas in every city and village. Big or small cities had their own mosque, and minarets were built in the central part of the city. Detailed construction is used in residential buildings in architecture [7,8,9]. Wooden elements in the building - columns, doors, ceilings - are decorated by carving or glazing.

In monumental architecture, large buildings were built first from raw bricks, then from baked bricks. Domes, arches and gables are used in the building. The Mausoleum of the Samonites in Bukhara was one of the first buildings built of baked bricks, and its architectural composition was solved. In the 11th century, bricks were often made with clay. By the 12th century, due to the use of ganch, the strength of the building increased significantly, the constructions of the building were improved or new structural elements were used.

The "Kalon" minaret of the community mosque in Bukhara was rebuilt for the third time in 1127 after falling down twice. Earthquake resistance of the tower increased as a result of placing the foundation at a depth of 10 meters [10,11]. The

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thickness of the walls was 80-90 cm. The walls bearing the load falling from the domes and arches were built monolithically in the corners, peshtob, archways. The dimensions of the porch and domes began to increase.

In the 12th-13th centuries, tiling began to find its place in architecture. In architecture, tiling dramatically beautifies the appearance of the building, and it prolongs the life of the building because it is resistant to water damage while harmonizing with the environment. The construction of mausoleums was further developed and some rulers were glorified. An example of this is the Shahi-Zinda mausoleum ensemble in Samarkand, the Hakimi-Al-Tirmizi mausoleum with a small dome in the city of Termiz, or the Sayed Bahram mausoleum in the city of Karmana. In the medieval architecture of Uzbekistan, there were several separate schools of architecture: Muvoraunahr, Fergana and Khorezm. As a result of the Mughal invasion of 1219-1224, the flourishing cities and villages were razed to the ground. In Central Asia, after 10 years, large cities began to "revive" slowly, so the architectural monuments of this period have reached us.

During the reign of Amir Temur, the power of countries in the world changed dramatically. As a result of Amir Temur's conquest of other countries, all wealth began to flow to Samarkand, the capital of Temur's empire. In Samarkand, in addition to scientists, prominent architects were brought from the conquered Iran, Iraq, Azerbaijan and India and involved in the construction. Solving major construction issues in the construction of large monumental buildings in architecture has led to the development of construction techniques. The lower part (foundation) of the buildings began to be built 4-5 m below the ground from hard stones, which were picked with moisture-resistant compounds.

The size of the porch, dome and pediments increased, the size of the pediment of Bibikhanim is 19 m. The dome of the White Palace in Shahrisabz is 22 m in diameter. The Ulugbek Khanakokhi dome in Samarkand was one of the largest domes in the East. In the second half of the Timurid era, it became customary to use double domes in architecture.

In the 15th century, decorative finishing in architecture rises to a new level. Finished terokat bricks are collected together with poshin polished bricks. The beauty of the building has increased as a result of carving decorations on the marble stones and finishing the facades of the building. In the interior of the building, cast ornaments, flowers carved on marble slabs, and in some cases gold-plated ornaments appeared [12, 13]. In the second half of the 15th century, a new technical finish (kunda) appeared in the decorative finish, in which gold water is applied to the dusty ceramic or porcelain relief decoration. In monumental architecture, the plan of buildings began to become more complicated. Large domes will be installed in the central rooms and their height will increase. The palaces and mausoleums of the Timurid period are among them. Among the mausoleums, Dorus-Saodat mausoleum in Shahrisabz, Ishratkhana mausoleum in Samarkand was the main room under the central dome, and there were several rooms around it. Gor-Amir mausoleum or Shokhi Zinda mausoleum together with several buildings formed an ensemble view. The composition of mosques, madrassas, caravanserais and palaces with courtyards has been widely used. In the composition of the buildings, there are pediments along one main axis, and the central room with its dome. The architects of the 15th century began to use many finishing works to give glory to the exterior of the building. For example: minarets calling people to prayer played a decorative role in the building and became its compositional part. Ornamental towers began to be installed in the outer corners of the building or complex. Since Central Asia is located in an earthquake zone, the tops of these towers began to collapse when the earth moved, thus damaging the domes [14].

During the reign of Amir Temur, minarets began to be installed on both sides of the peshtoks, later these minarets were lost and the peshtoks were given proportionality. Many architectural buildings were built in the second half of the 16th century. Engineering solutions in the construction of buildings and structures have risen to a higher level. Commercial buildings in Bukhara "Tim", "Toka", "Chorsu" are architecturally rational and, even if they are not decorated, they are distinguished by their solidity and interior comfort. Due to the use of roofs in water distribution engineering structures in Zarafshan, it has become harmonious with the surrounding nature. From the engineering solutions, the devices installed for light falling into the dome played a big role in lighting the interior of the building and normalizing the microclimate. Such devices were used in Mir Arab Abdullah Khan madrasa and other buildings.

In 1652, Abdulaziz Khan madrasa was built in Bukhara. This building is one of the last examples of monumental architecture in the period of the feudal system. In Central Asia, by the 18th century, the architectural activity stopped significantly. At the beginning of the 19th century, three khanates - Bukhara, Khiva and Kokan khanate - were formed in the lands of Central Asia. From this period, monumental and general constructions will rise to a new level. Palace madrasa mosques are built in large monumental ensembles in the model city construction of the post-feudal period in Khiva.

One of the new types of buildings in architecture is Chor-Minor in Bukhara. It stands out among the buildings with its four beautiful towers and a dome. The Tosh-Khovli in Hava, the Horde of Khudoyor Khan in Kokon, and the Amir's palaces in Samarkand are unique buildings according to their construction style. In palaces, carved pillars, dust ornaments, glazed ceilings, carved shelves in rooms were used in residential buildings [15,16,17,18]. The buildings built in Central Asia are built in accordance with the nature of this land. That is why residential buildings of each region differ in size and planning solutions.

The central core of the houses of Khiva is a courtyard, and two porches protrude from it, one of them is the right porch, which consists of high summer rooms, and opposite it, the reverse porch, which consists of one-story winter rooms. Bukhara residential buildings differ in several types. Their land area is small, and the buildings are often two-story, with a dry wall facade on the street side, and the interior is comfortably built.

Houses inside the yard are divided into winter and summer rooms. The two-story building has balconies on both floors. It is worth noting that in the interior of Bukhara houses, shelves, ganj, and hand-made fences are noteworthy. The courtyards of the residential buildings of Tashkent were large, and houses were built around it, and between the houses they built a one-column porch, semi-enclosed kindergartens.

Fargana Valley townhouses were built together with the park. The interior facade of the building often faces the garden. The "Kashkarcha" type building of Fargona residential buildings came from the Kashgar region of eastern China. In the middle part of this house, vertical windows are placed from the top to let in light, that is, they rise like a shed, the light microclimate in such a house is normal. In the Fargona Valley, all houses have verandas, and these verandas face south. In recent times, in the residential architecture, the organizational parts of the building were not built based on the basis, but the art of decorative decoration was used for them. National applied art goes to residential buildings and neighborhood mosques, baths and other types of buildings.

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