



ARCHITECTURE IV. CENTRAL ASIAN

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iv. Central Asian

Architecture in Central Asia dates back to the late Neolithic period (6th-5th millennia B.C.). In such settlements of Turkmenistan as Pessenjik Tepe and Jeytun, the typical buildings are one-family houses with a hearth and a special place for worship. The walls were made of lumps of raw clay and roofed with beams. Walls and floors were often painted. Fragments of pictorial wall painting have been discovered in Pessenjik Tepe. The settlements of Anaw I, Qara Tepe, and Geoksür attest that multi-family houses with many rooms were built during the Neolithic period (4th-3rd millennia B.C.); some rooms were decorated with wall paintings. Protourban complexes came into existence during the Bronze Age (3rd-2nd millennia B.C.), with dwelling houses, temples and blocks of workshops surrounded by a wall with a fortified gate (Altin Tepe, Namāzghāh). Dating from the end of the 2nd millennium B.C. are large square strongholds compactly built up inside (Sappali Tepe in Bactria), sometimes flanked by semicircular towers (Gonur Tepe and Kelleli in Margiana); by the 1st millennium B.C. there were towns encircled by moats and powerful walls (Elken Tepe in Apavartikena, Gaur Qal'a in Margiana, Afrāsīāb/Samarkand in Sogdiana), sometimes with semicircular towers and numerous loop-holes (Qizil Tepe in Bactria, Kalali Gir and Kuzeli Gir in



Ķvārazm). Dwellings typically have a square plan with a small inner court surrounded by chambers (Qizilča estate in Bactria). The palace in Kalali Gir (5th-4th cent. B.C.) is characterized by regular planning: a vast courtyard, rectangular chambers, halls with wooden pillars on stone bases. This palace and the stone capital from Sultan Uizdag in the shape of two male heads with ram's horns indicate a link between Ķvārazm and the Achaemenid kingdom. Throughout the entire ancient period building material consisted of large rectangular, unbaked clay bricks, adobe, and wood for roofing; simple vaulting was introduced at that time.

Central Asia in the 4th cent. B.C. to 4th cent. A.D. is distinguished by the flourishing of building in towns, owing to the general development of the urban economy, commerce, handicrafts, and cultural life. Defense requirements stimulated fortifications; the ancient cities and strongholds of Parthylene (Nisa), Margiana (Marv, Durnalī, Čelborj), Ķvārazm (Janbas Qaḷ'a, Angka Qaḷ'a, Hazarasp), Bactria (Old Termed, Zartepa, Dalverzīn Tepe, Qay-Qobād-šāh), Sogdiana (Samarkand, Yer Kurgan, Kurgān Tepe, Umaramin Tepe) were surrounded by moats and powerful walls with fortified gates and rectangular towers. Often there were numerous casemates in the walls, chambers for bowmen in the towers, and barbicans with emplacements for ballistas. Such fortifications gave the ancient cities a grimly imposing aspect. The earlier building materials continued to be used, but construction showed notable progress with the introduction of wide-spanning beams for roofing pillars (wooden, often on stone bases, but sometimes entirely of stone) and raw clay brick vaulting. Architectural structures based on local building traditions nonetheless showed great originality. Elements of Hellenic architecture—Corinthian and Ionic capitals, Attic bases, antefixes, profiled cornices—appeared in modified form in Parthian and Bactrian buildings.

Characteristic of the monumental architecture of eastern Parthia are vast halls surrounded by corridors, rectangular interiors with rows of columns disposed lengthwise in the center, small inner courts with columned *ayvāns* (the palace-temple complex of Nisa, the temples of Mansur Tepe). Decorations include features of the Greek orders, occasional monumental sculpture, and wall painting. The architecture of Bactria and Sogdiana developed a standard layout for wealthy residences and palaces, including a vestibule, central hall, encircling passage, and group of subsidiary and living rooms, with a special prayer chamber (houses on Dalverzīn Tepe, palaces of Kaḷčayān, Yer Kurgan). Topraq Qaḷ'a, the huge palace of the shahs of ancient Ķvārazm (2nd-3rd cent.),



included a system of communication, columned halls, passages, and chambers decorated with clay sculpture and painting.

In the 1st-2nd centuries A.D. in Bactria and in the 3rd century in Margiana Buddhist monasteries that were markedly different from their Indian prototypes appeared. The layout of the monasteries of Fayaz Tepe and Qara Tepe in Termed, and others at Ayrtam and Marv, consists of small courts, sanctuaries, encircling passages, cells, and the main object of worship—the stupa—which sometimes reached enormous dimensions (Zurmala in Termed). The decor of sanctuaries often included richly modeled and painted ornamentation.

The local cult temples discovered in Bactria (Dalverzīn Tepe, 1st-2nd cent.) and Sogdiana (Yer Kurgan, 3rd-4th cent.) present an original plan and are ornamented with sculpture and painting. Qoy-Qrīlgan Qalʿa in K̄vārazm (4th cent. B.C., alterations at the beginning of our era) was presumably a fortified mausoleum temple connected with the dynastic cult of the Khwarezmian kings, as well as that of celestial bodies. This monumental structure, surrounded by a fortress wall was circular in plan with a central temple surrounded by subsidiary buildings.

Social upheavals, the collapse of the Kushan and Arsacid empires in the 3rd century, and later the invasion of Central Asia by the nomadic hordes of the Kidarites, Chionites, and Hephthalites, brought ruin to the majority of the large cities and rural towns and a general deterioration of cultural life in the 4th and 5th centuries. But with the development of the feudal system and the formation of numerous independent feudal dominions, cultural activity revived throughout the region from the 6th to the 8th century. It was concentrated not only in the few cities (Samarkand, Panjikent, Bukhara, and some others), but also in numerous castles (*kešks*) of ruling lords (*dehqāns*) that were surrounded by the settlements of the vassals.

Early medieval architecture in Central Asia bears the signs of a new creative trend. Building techniques underwent some alterations: besides the roofing of beams (beams and frieze boards are often ornamented with carving), raw brick vaulting was widely used and led to new architectural constructions. One of the main structures of this monumental architecture is the *kešk*: a massive two-story building with a steep plinth, over which rise blank walls crowned with a crenellated cornice, which may be smooth (in Sogdiana, Šāš, and Ustrušana) or decorated with closely set, rounded pilasters (in Marv and



Ķvārazm). The towns, surrounded by fortified walls, had separate citadels. The space within the walls was densely filled with dwellings, shops, palaces, public buildings, and temples. The dwellings were two-storied and set close together to form large blocks. In Panjikent the houses contained living quarters and a four-columned guest room (*mehmānkhāna*) often decorated with wall painting. The palaces of Sogdiana and Ustrušana (Samarkand, Panjikent, Varakša, Qal'a-ye Qahqaha), with many chambers and state halls, were richly decorated with frescos, carved stucco (*gañč*), and carved wood. The diversity of religious cults led to temples for different creeds, most of them generously decorated with sculpture, painting, and carving. Two edifices in Panjikent, both with a columned portico facing a courtyard and a four-columned hall at the back, were probably connected with a local variety of Zoroastrianism. The Buddhist monasteries of Ajina Tepe and Qal'a-ye Kafirnigan in southern Tajikistan and the Buddhist temples in Āq Bešim (Kirghizia) and in Kuva (Uzbekistan) present variations of courtyard planning with an extensive use of vaulted roofing in their numerous apartments; the four-*ayvān* composition of two courts in Ajina Tepe is noteworthy. Ķaroba Košuk in Marv province is a Christian church on a rectangular plan with a transept on the east side.

After almost a century of cultural stagnation following the Arab conquest of Central Asia, the architecture of the 3rd-6th/9th-12th centuries vigorously revived. Under the Samanids, Ghaznavids, Qarakhanids, and Ķvārazmšāhs feudal towns grew steadily. Political instability encouraged the building of strong fortifications around the towns, including walls with semicircular towers (*borj*) and moats. The development of the merchant and artisan classes, as well as the problems of intensive building brought about the formation of building-trade corporations to organize the creators and transmitters of professional practices. During that period important regional schools of architecture developed in Transoxiana, Ķvārazm, Khorasan, and northern Turkestan. Building techniques made steady progress; the perfecting and economy of raw brick and adobe (*paḵsa*) constructions, extensive use of baked brick with *gañčka* mortar, and the development of the vault and dome technique determined to a great extent the solution of architectural problems of form. Domes and high vaulted portals played an important role in monumental buildings by defining their external contours; the domes also established the spatial arrangement of the interior. Techniques of architectural decoration, in addition to the traditional carving of stucco and wood, include ornamental brickwork with baked, sometimes figured bricks, and from the 6th/12th century, the use of intricately carved terra-cotta, glazed



bricks, and tiles. Central Asian architectural decoration presents features common to other countries of the Islamic world including geometrical, stylized plant, and epigraphic motifs. In the 5th-6th/11th-12th centuries the geometrical *gereh* (knot) design was dominant; the infinite combinations of the intricate designs of the *gereh* were based on the multi-axial partitioning of the architectural field and on systems of star-shaped and other polygonal figures. From the 4th/10th century, architectural epigraphy in the geometric kufic script was used extensively, along with the supple *nask* in the 5th-6th/11th-12th centuries.

By this time there was a typology for civic and religious buildings. The town dwellings of wealthy citizens were compact; reception rooms were often decorated with carved stucco (Marv, Samarkand). The palaces of rulers (in Samarkand, Termed, Khulbuq, Marv) contained many chambers and interior four-*ayvān* courts; the reception hall and state apartments were decorated with carved stucco, carved wood, and ornamental painting. In the countryside estates were enclosed by a high wall, with an inner court and peripheral subsidiary buildings. In the villages the feudal lord's *kešk* was transformed into a comfortable two-story house with a central *mehmānkhāna* and living quarters (still preserved in Marv province, in K̄vārazm). The growth of home and international trade led to the construction of large caravansaries along the trade routes, especially in the 5th-6th/11th-12th centuries (Akča Qal'a, Dayā Kātūn, in the sands of the Qara Qom, Rabāt-e Malek in the province of Bukhara, others in Dahestān). These have one or two courtyards, usually with vaulted *ayvāns* on the axes, a central, domed *mehmānkhāna*, and watchtowers at the corners; galleries around the courtyard once housed beasts of burden, living quarters, and store rooms. There were also caravansaries in K̄vārazm (Šah-Šenem); built mainly of unbaked brick and adobe they used baked brick as well (Dayā Kātūn). The blank walls of the caravansaries are smooth or patterned with blind arches, close-set semicircular pilasters, and sometimes figured brick facing. Engineering constructions included bridges, open water reservoirs (*hawzīw*), and covered *sardāba* cisterns.

Pride of place among Muslim buildings belonged to mosques, especially the *jom'a* (Friday) mosques that served as the principal social and ideological centers in towns and villages. Čār-Sotūn in Termed and Dīgarrōn in Bukhara (both 5th/11th cent.) represent somewhat different examples of round-pillared, five- to nine-domed mosques of simple and powerful architectural design. The mosques of Khorasan and Dahestān (in Bašan), Dandanakan,



Mašhad-e Mešrīān) consist of courts with encircling galleries and a central building on the axis in the form of a vaulted *ayvān* or domed pavilion. Suburban mosques, *namāzgāh* or *īdgāh*, destined for the celebration of Qorbān and Bayrām, consisted of a wall oriented toward Mecca with a *mehrab* (Namāzgāh of Bukhara, 6th/12th cent.) in front of which an arched domed gallery was sometimes erected (Talqatan Bābā ca. 489/ 1096, in Marv province). The mosques were usually richly decorated with glazed tiles, carved stucco, and carved wood. In Central Asia the minaret, a compulsory element attached to the mosque, took the form of a tapering, round tower, sometimes on a polygonal base, crowned by a multi-arched lantern. Its shaft was often divided into many bands filled in with patterned brick inlays (Burana in Kirghizia, Kalian in Bukhara, minarets in Babkent, Mašhad-e Mešrīān, and Uzgend). The Jar Korgān minaret (architect 'Alī b. Moḥammad al-Saraḳsī) is decorated with vertical rounded pilasters.

The idea of posthumous glorification of lay and spiritual feudal lords was embodied in architecture by monumental and richly decorated mausoleums. Already toward the 4th/10th century two architectural types had evolved: the central-plan mausoleum of the Samanids in Bukhara and the portaled Arabata in Tim are the first examples of a highly artistic utilization of the decorative possibilities of baked brick. A large number of stately mausoleums erected during the 5th 6th/11th 12th centuries represent various regional concepts of the arrangement of space volumes. In Khorasan and Tokārestān central plan mausoleums with a sharply pointed dome over a cubic space (one of the most striking examples is the mausoleum of Sultan Sanjar in Marv) coexist with the portal domed variety (Abu'l Faḏl in Saraḳs, Abū Sa'īd in Meana/Mayhana, the Uzgen mausoleums). Characteristic for K̄vārazm are tent roofed mausoleums with pyramidal or conic domes (Faḳr al dīn Rāzī and Tekeš in Kunya Urgenč). In Dahestān polyhedral mausoleums were erected with a strongly projecting vault behind the portal (mausoleums of Mašhad-e Mešrīān). Another particular type featured pairs of coupled mausoleums connected by a vault or a domed chamber (K̄vāja Mašhad in Sayyed, two Qarakhanid mausoleums in Uzgen).

A century after the Mongol conquest, monumental building in Central Asia was mainly concentrated in capital cities such as Bukhara and Samarkand or in the vicinity of Muslim sanctuaries. The achievements of 8th/14th century architecture are embodied in a number of commemorative monuments. The mausoleums of Sayf al dīn Boḳarzī and of Buyan qolī Khan in Bukhara,



Moḥammad Bošaro in Mazār-e Šarīf, Imam Main and Ḥaẓrat Šayḳ in the Kaška Daryā region, Najm al dīn Qobrā and Turabek Kānom in Konya Urganç, the mausoleums of Mezdākān and Kīva, and the mausoleum (gonbaḍ) of Manas in the Alatau hills illustrate the increasing complexity of plan and of space volume compositions, which at times combine several domed vaulted chambers. Architectural decoration was enriched with extensive use of polychrome glazed tiles. Terra cotta (partly, and later completely, glazed), inlays of unglazed and glazed bricks, polychrome majolica with under and overglaze painting enriched the facades and sometimes the interiors of buildings. Ornaments designed with a general geometrical segmentation of the pattern usually featured stylized plant motifs and inscriptions in the intricate *dīvānī* script.

The monumental architecture of Tīmūr's times evolved from the unification of the creative efforts of master craftsmen of Central Asia, Iran, Azarbaijan, Syria, and India and then influenced the architecture of those countries in turn throughout the 9th/15th century.

Timurid architecture is distinguished by its grand scale, bold engineering solutions, and magnificent decoration. Urban building activity included the erection of mighty fortress walls and fortified gates, the opening up of new main thoroughfares lined with market buildings, and in the suburban zone, the laying out of gardens and the construction of palaces for the rulers and the aristocracy. Thinking on a large scale, the architects of the late 8th 9th/14th 15th centuries constructed whole architectural ensembles or complex monuments such as the mausoleum of Aḥmad Yasavī in Turkestan, Dār al Sa'ādat in Šahresabz, and the mosque in [Anaw](#). Architectural ensembles were either composed on a strict system around squares (Rēgestān in Samarkand) or formed by a free siting of buildings (Šāhī Zenda in Samarkand). Magnificent edifices included those intended for formal functions (Āq Sarāy in Šahresabz) or those simply for pleasurable entertainment outside the towns (there were dozens situated in the district of Samarkand). The typology of the planning and space volume solutions of Muslim constructions was finally worked out—four *ayvān* mosques with a central court (Bībī Kānom in Samarkand, Kalian in Bukhara), madrasas with an entrance portal and a system of cells (*hojra*) around a two or four *ayvān* court (Uluḡ Beg's madrasas in Bukhara, Samarkand, Giždovān). The composition of mausoleums developed from a single volume unit (e.g., Rūhābād, Gūr Amīr in Samarkand) into a complex structure (Ešrat kāna, Āq Sarāy in Samarkand). Architectural ornamentation



attained unprecedented magnificence; besides majolica and inlays of glazed brick, polychrome, mosaic inlays (*kāšīn*) or carved marble slabs and lattices were used extensively. In brick ornamentation large size *gereh* predominated; in the glazed it was stylized plant designs and the intricate interlacing of the elegant *tolt* script. Interior decoration included glazed brick panels, ornamental wall painting (both polychrome and monochrome blue on white), and relief *kundal* painting with gilding.

In the 10th 11th/16th 17th centuries when the provinces of Central Asia were held by the Shaibanids and the Ashtarkhanids and in part by the Iranian Safavids, building activity was concentrated in the capital city of Bukhara and in the large feudal centers of feudal dominions—Samarkand, Tashkent, and Termed. Monumental architecture continued the traditions of the Timurid epoch, but original thinking was manifest in the bold vault and dome systems that created new spatial organization of the interiors. Civic constructions included multidomed market buildings set up at crossroads or along main trade arteries; these featured central, domed space surrounded by vaulted lanes and numerous trade and workshops (Šahresabz, Taq and Tim in Bukhara). Numerous caravanserais and cisterns were built on caravan routes. Religious buildings on a monumental scale included mosques, *kānaqās*, and madrasas. Most typical were large Friday mosques with rectangular courts encircled by vaulted and domed galleries; the main domed building was emphasized by a high *ayvān* (Kalian in Bukhara after rebuilding, *Kök Gönbađ* in *Ķojand*). Other constructions included *namāzgāhs* (in Samarkand, *Kök Gönbađ* in *Karšī*), ward and village mosques with winter quarters and a columned *ayvān* (in Langar, Baland in Bukhara), memorial mosques (*Ķoja Yusup* in Marv). In the 10th 11th/16th 17th centuries *kānaqās*—houses of dervish sects with a formal central hall for Sufi gatherings—were numerous (*Ķoja Zayn al dīn*, *Fayzābād*, *Nāder Dīvān Begī* in Bukhara, *Qāsem Šayĵ* in *Kermine*, *Emām Bahr* in *Qāl'a ye Dabus*). Madrasas have the traditional plan of an enclosed courtyard, with the main façade distinguished by a portal and corner minarets (*Šīr Dor* and *Tella Karī* in Samarkand, *Kukeltaš*, *Koš Madrasa*, *'Abd al 'Azīz Khan* in Bukhara *Kukeltaš* and *Baraq Khan* in Tashkent). The façade of these monumental buildings were covered with glazed tile decoration; while the first half of the 10th/16th century maintained the Timurid standards, quality declined sharply in the second half, and mosaic was replaced by three colored majolica slabs with blurred designs. A revival of mosaic inlays followed in the 11th/17th century, with interior decorations including glazed brick panels and the ceiling painting in the *kundal* technique,



or colored, encrusted *qerma* and *časpak* stucco on walls and ceilings. Complex woodwork was inlaid on ceilings, doors, and pillars (Bukhara, *Ḳīva*).

An outstanding architectural achievement of the 10th 11th/16th 17th centuries was the creation of vast complexes, mainly religious in function: the *Rēgestān* in Samarkand, rebuilt in the 11th/17th century, combined three madrasas; *Lab-e Ḥawẓ* in Bukhara with a great tank framed by two madrasas and a *ḵānaqā*, the necropolis of the Bukharan *Jūybārī* shaikhs, *Čar Bakr* with a mosque, madrasa, *ḵānaḡā*, and groups of tombstones on family *daḡma* platforms; necropolises in Kasbi and Pudina picturesquely adapted to the landscape of the foothills, and many others.

In the 12th/18th century, during the period of social crisis, architectural activity in Central Asia was almost at a standstill; it recovered only toward the beginning of the 13th/19th century in the main cities of the khanates of Bukhara, *Ḳīva*, and *Ḳoḡand*. The fortified nucleus of *Ḳīva*, *Ičan Qal'a*, has survived almost unaltered since this period. The city with its citadel *Kunā* (*Kohnā*) *Arg* is surrounded by mighty walls with semicircular towers, crenelated parapets, and fortified gates. Much attention was given here to civic buildings (market galleries, rows of shops, and baths) with exterior contours dominated by numerous domes. These commercial buildings are practically devoid of decoration, but glazed tile facings richly cover palatial and religious edifices such as the mausoleum of the *Kungrad* dynasty (*Pahlavān Maḡmūd*), and numerous madrasas, mosques, and minarets. Religious buildings in Bukhara, *Ḳīva*, *Ḳoḡand*, *Karši*, and *Tashkent* follow traditional schemes.

The creative genius of the Central Asian architects of the 13th/19th century manifested itself to the highest degree in popular architecture. Several schools can be singled out: those of *Farḡāna*, *Samarkand*, *Bukhara*, *Ḳīva*, and a distinct folk architecture in the mountainous regions. All of these schools demonstrate careful consideration of natural climatic conditions, special features of planning and space volume solutions, and fine working out of detail. The popular traditions of building decoration—carved doors and ornamental pillars, painted ceilings, stucco variously carved with painted ornamental details and background—have all been preserved. The best masters of folk art were called to ornament the palaces of rulers (*Taš Hauli* and *Kūzišḡāna* in *Ḳīva*, *Urda* in *Ḳoḡand*), residences of wealthy citizens, and ward and rural mosques. These traditions have been carried on to the present times by folk craftsmen.



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See in print ed., *Eir.* II/4, London, 1986, pp. 338-39.