ARCHITECTURE

Architectural Features of Iran in Islamic Period

Some of the researchers like Professor Wilber believe that implementing each architectural design depends on three social elements. Firstly, to the society which needs that design, secondly, person(s) who support such an implementation and take charge of financial costs, thirdly, architect who implements the design. The interesting thing about this research and study is that we can understand how these three elements affect each other and finally lead to construction of a building.

Usage of Buildings

The studies on the architecture of Iran show the way of their development during the past 15 centuries. In each period, buildings with various features constructed in villages, cities, caravan routes, desert regions, mountainous passages, and coastal cities which had different usages.

The importance of Islamic architecture reveals when we came to know that in the constructions of this period special considerations have been paid to worldly and unw worldly usages of the buildings which are the most important features. For understanding the importance of these features in the development of architecture, it is worth classifying the buildings of Islamic period and their usages. On the whole, the buildings of Islamic period can be divided into two main groups:

A) Religious Buildings including mosques, cemeteries, schools, lamentation places and praying places.
B) Non-Religious buildings including bridges, castles, caravanserais, baths, bazaars, forts, and cisterns.

In the above groups of buildings in Islamic period, there were certain places for prayer, trade and residence.

**Mosques:**

Mosques were the most important religious buildings in every village and city and they always played important role in the lives of Moslems. Friday prayers, religious ceremonies, giving sermons, and teaching were performed in the mosques, because mosque was the best place for announcing government orders to people.

The remaining cornices on the walls of the mosques (Masjid-i-Jami’ of Qzvin and Kashan) contain places dedicated to development and repair of the mosques by donator or ruler.

Most of the mosques were built in the city centers, near bazaars and around the town hall, and if a city needed more than one mosque, other mosques were built by the government or donators. They were so important that in case a city did not have a Jami’ Masjid, the city itself had no importance. In the early Islam period, mosques had simple designs and it did not take long they adopted various designs and decorations and complicated pattern.

From A.H. 4th/A.D. 10th century onward design of the mosques revolutionized and based on that different mosques were built in cities. The most important designs applied in the mosques included: one-loggia, two-loggia, four-loggia, and combination of four-arch and loggia which were derived from
architectural designs of *Parthian* and *Sassanid* periods by the architects of Islamic period. For example, the four-loggia design, used in many buildings, inspired by the design of Assyrian castles belonging to Parthian.

Islamic period architects decorated the mosques in different ways. In each period, one of the decorative elements was prevalent in decoration of the mosques, for example, in the brickwork of *Seljuqid* period, plasterwork of *Ilkhanids*, tiling of *Timurid* and *Safavid* periods, they had been more in vogue and in some cases, brickwork decorations, plasterwork, and tiling were used altogether.

**Schools:**

In the early Islam, teaching of religious materials was done in the mosques. Gradually with the development of erudition, educational space was separated from the mosques. In the A.H. 5th/A.D. 11th century (in *Seljuqid* dynasty) numerous schools were built in famous Islamic cities like *Baghdad*, *Nishabur*, and *Jorjan* by the encouragement of *KhwajaNizam-ul-Mulk*. Later, the four-loggia design was implemented by the architects for educational spaces. Around the loggias one or two-storey rooms were constructed for the stay of religious erudition students and scholars. Apart from teaching times, they were also used as mosques. Like the mosques, the schools were decorated with brickwork, plasterwork, and tiling (like *Ghysasyyah*, *Chaharbagh*, and *Motahhari* schools).

**Shrines**
Generally, shrine was applied for buildings in which there are one or some religious or political figures. These kinds of buildings can be divided into two groups of religious (pilgrimage) and non-religious tombs.

Religious tombs have become well-known for an Imamzada (descendant of Imam) in most of the cities and villages and in comparison to other Islamic buildings (except mosques) they had specific esteem. More than any other buildings of Islamic period, Imamzada shrines were specially respected and cared by Shi'a Muslims. The above mentioned buildings were developed during different periods and a shrine turned into a glorious collection (like building collections of Mashhad, Qom, Bastam, and Sheikh Safi Shrine in Ardabil). Tombs often constructed in annular, square, octagonal, and different architectural designs (like the tomb of Isama il of Samanid dynasty (A.H. 3rd/A.D. 8th) in Bukhara, Gunbad-i-Qabus in Gorgan plain, Radkan Tower in Khurasan, ‘Ala-ud-Din Tower in Varamin, and Sultanya edifice in Zanjan). Like other buildings of Islamic period, tombs were decorated with brickwork, plasterwork, tiling, and mirror-work.

Only during Islamic period in Iran, construction of these shrines and tombs took unique architectural features and glorious decoration. These buildings have been known as tower, dome (Ganbaz), tomb, and shrine (like Ardakan Tower, Gonbad-i-Qabus and tomb of Sheikh Safi).

Bridges

Bridges and dikes are non-religious constructions which have been made on caravan routes, roads, and over the rivers. The most important bridges were
made over the uncontrollable overflow rivers of caravan routes. From the ancient
times when the man could not control water and specify its direction, he used
trunk for crossing rivers and bridge-making started.

In addition to construction of bridges for facilitation of crossing, Iranian
architects had creation of dikes in mind. It is evident in the most ancient bridge
of Achaemenian period in Marvdasht, Bisotun in Kermanshah (in the West of
Iran), Band-i-Amir in Fars from Bouyid dynasty, and Khwaju bridge of Isfahan.

Iran of ancient and Islamic periods has paid special attention to bridge
development – starting from A.H. 8th/A.D. 14th century up to now. The remains of
bridges and dams are indicative of a kind of architecture of those times. Iranian
architectures taste and gift for decorating bridges are interesting to note, some
bridges had brickwork and tiling decorations (like Khwaju bridge of Isfahan).

Castles

Construction of castles dated back to ancient times. Today’s concept of
castle was different from the past’s concept. In the past, distinct edifices were
built with a more superior architecture than other buildings and they had various
usages. For example, sometimes a building was used as a temple and
sometimes as a defensive fortress and sometimes for the residence of rulers
Chaghazanbil). Gradually, the identities of these buildings changed and castles
became the residing places of different dynasties in Iran, for example, during
Achaemenian period it was Takht-i-Jamshid (Persepolis), in Parthian period it
was Ashur Castle, in Sasanid they were Tisfun, Kasra, and Sarvistan (Fars
Province). In Islamic period these edifices were gradually used for the residence of government officials.

Nothing has remained of castle or glorious building with superior architecture from early Islamic period. The architectural design of Al ‘Imrah and Al Mushta Palaces – built in Umayyad dynasty and some remains are still there – had been adopted from artistic designs of Sassanid period.

Starting from Safavid period, new designs had been applied in construction of castles and in the three capitals of that era (Tabriz, Qazvin, and Isfahan) interesting castles had been built.

Castles of Chihil Sutun (forty pillars), Hasht Bihisht, and ‘Ali Qapu in Isfahan, Safiabad in Behshar (Mazandaran province), Fin of Kashan, Farahabad in Sari (Mazandaran province) were the most important examples of architectural method in Safavid dynasty. Constructions of these castles were continued in the same way till Nadir Shah of Afsharid period (like Khurshid-i-Kalat castle in Northern Khursasan province) and Qajar period (Sahib Qarannya and Shams-ul-Imara castles in Tehran).

Castles in Iran had different patterns: some were like palace (namely Hasht Bihisht and Safiabad), some had square and rectangular patterns and some were multi-polygonal. The most important issue in construction of these castles especially in Safavid period onward was decoration with tiling, plasterwork, mirror-work, and stonework.

Caravanserais:
With regard to social, economical, and religious situation, construction of caravanserais had special importance from ancient times in Iran. Generally, caravanserais were divided into two groups of within-city and out-of-city.

Development of trade and pilgrimage routes led to the construction of caravanserais for the stay and rest of caravan people on caravan routes all over the country. With 26 kilometers interval a caravanserai was built in Iran. Pilgrimage to religious cities like Qom, Mashhad, and Karbala (in Iraq) brought about the construction of numerous caravanserais in the direction of the roads leading to these cities (one the directions of Khurasan-i-Bozorg, west to east, Kirmanshah and Mashhad). This important road was connected from the west to the religious cities of Najaf and Karbala and from the east to Imam Reza shrine in Mashhad. Also in Safavid period caravanserais had been built for the welfare of the pilgrims and the remains of 50 caravanserais of those caravanserais can still be seen.

Architecture of caravanserais in Iran is very diverse. By paying attention to climatic situation of Iran, architects have built caravanserais with different features. In the construction of out-of-city caravanserais the patterns of four-loggia, two-loggia, octagonal, annular, mountainous, and Persian Gulf banks have been used. Like mosques and schools, in the construction of caravanserais mostly four-loggia pattern have been used and rooms all around the yard have been built for travelers. Some caravanserais have been decorated with brickwork, plasterwork, and tiling (like Robat-i-Sharaf of Khurasan, Sepanj caravanserai of Shahrud, and Mahyar of Isfahan).
Baths:

Baths are non-religious buildings constructed in different cities and villages. In various religions, the cult of washing and cleansing has special importance. According to the existing documents paying attention to cleanliness and neatness in Iran dates back to ancient times and even earlier than Zoroaster. Men’s need for a place for washing and cleaning led them to construct baths. According to archaeological documents, of the most ancient baths we can refer to a bath in Takht-i-Jamshid (Persepolis) in Achaemeinian period and a bath in Ashur castle belonging to Parthian.

After emergence of Islam, cleanliness especially numerous washings for performing five-time prayers attracted special significance in the daily lives of Muslims to the extent that the saying of prophet Mohammad “cleanliness is a sign of faith” became the motto of each Muslim.

In Islamic cities, the baths were made in main crossing of the cities, near bazaars and governmental castles where there were no hassle for water supply and drainage. It can be said that after mosques and schools, baths were the most important urban buildings.

The main space of each bath included dressing room, a room between dressing room and hothouse, and hothouse. Each of these spaces was separated so that the temperature and humidity of each space was regulated by those of neighbouring spaces. The bath floor was covered with marble and other stones, walls of the bath were decorated with stone and tile and the gate with stone, brick, and tile. Internal decorations of the baths were simple and colourful.

**Forts:**

Men always had in mind defense against enemy in home construction and the forts were the clear signs and result of this thought. Generally, forts can be divided into two main groups: mountainous forts and plain forts. As it was mentioned about the castles, one edifice can have different functions. The forts have been used as castles at the time of peace. Based on this descriptions, Takht-i-Jamshid (Persepolis) can be regarded as a castle with regard to its design. Takht-i-Sulayman in Takab of Azerbaijan which was a holy place and used as a prayer place was used as a castle. The biggest and the most fortified forts constructed in Iran belonged to Isma’ili communion. They were built on the heights of Alburz Mountains (like Alamut, Lambesar, Gerdakuh, Saru, and Imameh).

Architecture of these forts had defensive and military aspects and their design and pattern had various features. The forts were constructed in the most difficult crossing places of mountain heights, and since they had no pre-fabricated design and pattern, the design or architecture of walls, towers, rooms, and entrances were constructed in regard to the natural situation of rocks. That is why; the mountainous forts often had no distinct geometrical design. Materials used for construction were mostly cobblestone and brick, and their grout was cement and lime.
The forts constructed in plains for the protection of caravans and the use of soldiers had mainly specific geometrical designs in square, rectangular, polygonal, and annular forms (like Geli (Iraj) Fort of Varamin, Myan Goleh of Gurgan, Gushchi of Urmiah, and Qal’ih Kohneh of Kirmanshah).

In the A.H. 12th /A.D. 19th century, construction of the forts was stopped to be made in the earlier style, and outposts and barracks were constructed in new styles. Along the costs of Persian Gulf, the forts were constructed on the style of western architecture (like forts of Urmoz, Khark, Qishm, and ‘Abbas Sea port).

Cisterns:

The climatic situation of different regions in Iran had great influence in architectural innovations of this country. From the ancient times, special attention has been paid for water supply in construction of ducts and dams for storing winter water and using it in dry seasons, and thus, cistern had been made. The oldest remaining cistern is the water storage source of Chaghazanbil temple in Tekht-i-Jamshid in Achaemenian period.

The cisterns are divided into two main groups of public and private cisterns. From architectural aspect, cisterns include water storage source, source coverage, wind-breaker, ventilator, stairway, Pashir389, decorated gate, and cornice constructed in different cubical, rectangular, cylinder and polygonal shapes.

Construction materials are stone, brick, lime, and cement. A number of these cisterns are decorated with brick and tile (like cistern of Qazvin, Deh Namak of Semnan, and Panj Badgir of Yazd).

389 - Valve place.
Bazaars:

Construction of bazaars in Iran dates back to ancient times. According to historical documents, before Islam, bazaar has been one of the important elements of urbanization in many cities.

Before Islam, development of Islamic cities and increase of social relations, multiplication of caravan routes, development of caravanserais, and economic exchange led to the formation of commercial and productive atmosphere called bazaar. In Islamic cities, bazaar was the main axis and economic centre of a city and important cisterns, production centres, distribution centres of different goods and monetary exchange shaped it.

The bazaars usually were constructed along the main routes of a city and in most cases it was the mainline of the city and connected the most important and crowded gates to the city centre (like Sultania Bazaar, Isfahan Bazaar, and Bazaar of Nain). In most Islamic cities, the main mosque was located near a bazaar.

Shops were located on the both sides of bazaars. Some of the sides or lines were specified to the sale of particular items such as bazaars of drapers, shoemakers, goldsmiths, and blacksmiths. Within-city caravanserais – as it was discussed earlier – often were located behind the shops and they were connected to bazaars through a passageway or small space.

Length of bazaars had no specific size and differed according to area of a city and prosperity of bazaar. The length of main line in small and average cities
was some hundred meters and in big cities it was more than one kilometer and the width of bazaars were five to ten meters.

The best materials and architectural styles were used in the construction of bazaars. Piers and walls were usually made up of stone and brick, and plaster and brick had been used for covering ceiling. Dome was used for covering big hatchways like crossroads and plazas. Roofs of the bazaars were usually covered with mud mixed with straw, because it was both heat and humidity insulation. Floor of the bazaars were earthy and by the elapse of time, it was pounded and solidified. Sometimes, stone and brick were used for covering the floor of bazaars and cells.

Anyway, bazaar is one of the most important public buildings in different cities. It was primarily formed for offering production, exchanging, purchasing and selling which later adopted numerous cultural and social functions. Economic growth and development led to emergence of various bazaars such as periodic bazaars, rural bazaars, regular bazaars, mid-way bazaars, and urban bazaars.

**Iranian Influence on Medieval Indian Architecture**

Indo-Muslim architecture, as it developed India, heavily borrowed stylistic, idiomatic (characteristic forms, architectonic and decorative), axiom orphic (forms appropriate to the purpose of the structure) and aesthetic traditions from Iranian, Transoxiana and regional Indian style. This borrowing was the much heavier after the establishment of the Mughal dynasty. Mughal architecture borrowed extensively from the Delhi Sultanate, Sharqi, Gujarat, Malwa, Bengal and
Rajasthani styles, as well as from styles abroad, so much so that it has itself been defined as a synthesis of these foreign and indigenous styles\(^{390}\).

Historically speaking, there two genera of actuate styles, the Roman and the Parthian, which heavily influenced the emergence of ‘Islamic’ architecture. A sub-genera (or ‘complex’) of the Parthian genus, the Iranian style of architecture, which includes the Ilkhanid (Mongol), Timurid and post-Timurid traditions, became a matrix for the Turkish and Indian regional style, of which the Mughal or ‘pan Indo-Islamic’ variant was the most developed\(^{391}\). The Timurid tradition includes elements of architecture which Timur and his successors, the Muzaffarids of Fars, Kirman and Isfahan, and Timur’s grandson Shahrukh, imbibed from Iran and applied in Samarqand, Bukhara and Heart. The post-Timurid variant of the Iranian style developed under the patronage of the Shaibanids and Astrakhanids. The Safavid variant was the culmination of the Iranian style of architecture\(^{392}\).

A large number of Iranian architectural features are perceptible in Indian architecture since the establishment of the Delhi Sultanates in the twelfth century. The first monumental Sultanate structure, the Qutb complex, comprising the Quwwat-ul-Islam Mosque, the Qutb Minar and the ‘Alat Darwaza, reflect


\(^{391}\) See Jose Pereira, *Islamic Architecture: A Stylistic History*, New Delhi, 1994, pp. 4-5.

\(^{392}\) Ebba Koch, on the other hand, differentiates between the Iranian and Timurid styles of architecture; See Koch, *Mughal Architecture*, p. 14.
Iranian concepts and origins. Modeled after the Ghurid period mosques, the Quwwal-ul-Islam follows the Seljuqid Iranian plan of the four-aiwan (Portico) courtyard mosque, with certain modifications\textsuperscript{393}. The four-aiwan (Portico) courtyard mosque plan was one in which an integrated enclosed space was created by the symmetrical repetition of aiwans (portals) and arcades on the main and transverse axes, thus creating a structure with a centralized court-chamber and a portal on the side facing the Qibla (direction of Mecca).

At the Quwwat-ul-Islam Mosque (c.1197 A.D./606 A.H), however, the Iranian aiwan (Portico) is replaced by a central ogee-shaped arch flanked by two lower arches. At the ‘Arhai din ka Jhonpra’ Mosque at Ajmeer, constructed two years later (i.e., in 1197 A.D./608 A.H.), we get three engrailed ogee-shaped arches instead of aiwans. Over a century later, in the more authentic Iranian fashion, an aiwan replaced the central arch. The first example of such a construction is the Jahanpanah Mosque at Delhi (c. 1343 A.D./752 A.H.). In the Delhi Sultanate version, the atrophied four-Aiwan mosque appears to have been preferred, since the tendency was to retain only one of the four-Aiwans, that of the western aiwan (ante-chamber). This modified four-Aiwan Iranian mosque plan appears to have been followed throughout the Sultanate period in India.

In elevation, the medieval Indian mosques were more templar in form, however, deriving from the well-established temple architectural traditions of the country where they were being constructed. The four-centred Iranian arch, nevertheless, found ready acceptance among the early medieval architects of

India from the *Khilji* period onwards. Similarly, the arabesque patterns were also readily imbibed by Indian masons. The medieval Indian arabesque carvings, first exemplified on the *maqsura* (screen) of *Qutb-ud-Din Aibak* at the *Quwwat-ul-Islam*, are much more naturalistic than what is found in their *Ghurid* Iranian homeland, where they flatter and abstract. The *Shah-i-Mashhad Madrasah* in *Gharjistan* (Afghanistan) appears to have inspired the Indian masons who carved the *maqsura* of the *Quwwat-ul-Islam* Mosque added by *Sultan Iltutmish*. The carving and arabesque patterns on the Tomb of *Sultan Iltutmish* too appear to have been inspired by the *Shah-i-Mashhad Madrasah*. The Tughluq period saw the profuse use of rubble stone as the basic medium of construction, and thus stone carvings and arabesque patterns were not generally resorted to. However, the Mughal period marked their reappearance. The Delhi Sultanate tomb plans too appear to have followed the Seljuqid and Iranian traditions. The domed square-chamber Tomb of *Sultan Iltutmish*, which was one of the first extant tomb structure to be constructed under the Delhi Sultans (1236 A.D./654 A.H.), appears to have followed the traditions which were finally established at the tomb of *Shad-ul-Mulk at Samarqand* (1371-93 A.D./780-92 A.H). The Iranian paradisiacal imagery in funerary architecture, which became so forceful later, was also introduced from Iranian traditions into India during the reign of *Iltutmish*. Subsequently, the Tughlaq tombs of Muhammadbin Tughlaq and Firuz Shah were also in the same tradition.

The Iranian impact on medieval Indian architecture was much more forceful after the establishment of the Mughal Empire. A study of the Mughal
architecture reveals that the Mughals, who considered they t be the heirs of the Timurid tradition, borrowed heavily from the Iranian style which had developed under the Ilkhanids, Timurids and Muzaffarids. When Babur marched into India, he brought along with him two Iranian architects, Ustad Mir Mirak Ghiyas of Heart and Ustad Shah Muhammad of Khurasan\textsuperscript{394}. According to Lisa Golombek, the Shaibanids of Bukhara were a conduit for the transmission of Timurid architectural forms to the Mughal\textsuperscript{395}. It should be borne in mind that much of the synthesis of the Iranian style with the Indo-Muslim style of architecture in India took place only till the reign of Akbar. The reign of Shahjahan is marked by the heavy influence of indigenous styles on Mughal architecture.

Idiomatically and axiomorphically, one of the most important marks of Iranian influence on the Mughal architectural tradition was the Chaharbagh, the four-quartered paradisiacal garden with its intersecting water channels lined with walkways (Khiyabans), platforms, water chutes, tanks and fountains, flower-beds, fruit-bearing trees and foliage, all surrounded by screen walls and gateways\textsuperscript{396}. These Chaharbagh gardens were to become the standard setting for Mughal tombs. In these gardens, the focus was the centre, marked by the construction of a large platform. Typical examples of funerary gardens from the Mughal period are Humayun’s Tomb at Delhi, the Tomb of Akbar and ‘Maryam’ at Sikandra (Agra). The Tomb of I’timad-ud-Daula at Agra, and the Tomb of

\textsuperscript{394} - Babur Nama, Te. By A.S. Beveridge, New Delhi, 1970, pp. 343, 642.
\textsuperscript{395} - Lisa Golombek, ‘From Tamerland to the Taj Mahal’, pp. 43-50.
Jahangir at hahdara, Lahore. In the Taj, the focus was shifted from the centre to the periphery, namely, the river front, where the mausoleum was constructed. Further enhancement of the riverfront was provided by constructing octagonal bastions flanked by a mosque (west) and a Mehman Khana (east) in the corners. The mausoleum and the main gateway are on the main axis, while the terminals of the traverse axes are marked by a pavilion on each side. The structures on the terminal points of the axes of the garden result in a cruciform shape which is similar to the plan of the cruciform (Chahar Taq) tombs and mosques of Iran, such as the Musalla of Gauhar Shad, Heart (1417-38 A.D./826-47 A.H.) and the Jam’i Masjid of Turbat-i-Shaikh Jam (1440-43 A.D./849-52 A.H). This shift of emphasis from the centre to the terminus is, however, first seen in the Tomb of l’timad-ud-Daula where, although the mausoleum was retained in the centred a riverside decorated pavilion was added397. A forecourt (Jilau Khana) with a series of cloistered cells was also added to the Chaharbaghs in the Tomb of Jahangir and in the Taj Mahal.

The Chharbagh was first introduced in India by Babur who constructed a number of them at Agra and nearby places. One of the earliest gardens on the Chaharbagh pattern to be laid out by Babur was the Bagh-i-Fath situated between the lake and the ridge at Fatehpur Sikri. Rectangular in plan, it comprises intersecting water channels and Khiyabans. In the centre is

397 For further such examples from the reigns of Jahangir and Shahjahan, one might refer to the Buland Bagh, Bagh-i-Nar Afshan and Bagh-i-Jahan Ara, all situated on the left bank of the Jamuna at Agra. For the Bagh-i-Jahan Ara (Zahra Bagh) see Ebbe Koch, “The Zahara Bagh (Bagh-i-Jahan Ara) at Agra’, environmental design, n.d., pp. 30-37 (special issue on ‘The City as a Garden’.)
constructed an Iranian inspired pavilion (*Baradari*). Aligned on an east-west axis, it is surrounded on all sides by a cloistered *riwaq* (verandah) pierced by an entrance in the north. The water channels, which are provided with *mahi-pusht abshars* (fish-scaled chutes), are connected with a step well *Baoli*) in the west and a well (*Chah*) in the east. A more elaborate *Chaharbagh* of *Babur*, the *Bagh-i-Nilufar* (Lotus Garden), survives at *Dholpur* (Rajasthan). Two other gardens of his which have been identified are so-called *Ram Bagh* (*Aram Bagh* or *Bagh-i-Gul Afshan*, later renovated by *Nur Jahan* and thus renamed *Bagh-i-Nur Afshan*), and the *Bagh-i-Hasht Bihisht*, which were located on the left bank of the *Jamuna* at *Agra*.

The *Chaharbagh* introduced by *Babur* not only became a major element of urban landscape under the *Mughals*, but also inspired the lay-out of the *Mughal* cities themselves. The centripetal symmetry of the *Chaharbagh* was invoked in the planning of the *Mughal* city. The organizing instruments of the garden, such as the axes, Joints defined by pavilions, platforms and walkways, were transformed and enlarged architecturally into roads, caravanserais, monumental structures and quarters. Examples of such town planning on the *Chaharbagh*

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398 - For the identification of this garden, its plan and its site, see: S. ‘Ali Nadeem Rezavi, ‘Exploring the Mughal Garden at Fathepur Sikri’.
pattern are provided by the towns of Fathepur Sikri and Shahjahanabad (Delhi). The cross-shaped or quadripartite symmetry encountered at Shahjahanabad and, to an extent, at Fathepur Sikri, reminds us of Isfahan of the Safavid period with its Maidan (promenade) and Chaharbagh. The use of the Chaharbagh as an instrument of urban landscaping and town planning involves the Iranian imagery of paradise which is central to the Parthian genus of architecture.

Idiomatically, apart from the Chaharbagh, there appear to be a number of other Iranian features which are encountered in Mughal architecture. Some of them, like the double dome (which developed in Iran during the fourteenth century) and the quenches on which the domes are raised (Sassanid) had been introduced into India during the period of Delhi Sultanate and are generally found in Tughlaq monuments. The Iranian four-centred (as well as two-centred) pointed arch, as we have seen, was also known in India; but subsequently it came to be identified as the typical Mughal arch during the reign of Akbar. It was ultimately replaced during Shahjahan’s period by the cusped (multi-foliated) arch which was ultimately derived from the Gandharan lobed arch. The bulbous double dome, on the other hand, is first encountered in a hesitant from in Humayun’s Tomb and is subsequently perfected during the reign of Shahjahan when we find it in the Tomb of Taj Mahal.

India, however, showed less inclination to imbibe the distinctly ‘Muslim’ idiomatic forms of adornment, calligraphy, arabesque and muqarnas (stalactites). The use of the typical mosaic tile was confined to a handful of monuments under

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the Mughals. For example, it appears on the Tomb of Afzal Khan (Chini ka Rauza) at Agra in its most profuse form. At other places the use of coloured glazed tiles - so popular in Iran – remained confined to the outer facing of the domes (for example, Nili Gumbad and Sabz Burj near Humayun’s Tomb, Delhi, constructed sometime during the early sixteenth century). Brick-tile decoration is also found in the Lahore Fort. Calligraphic bands, so preferred in Iranian architecture, make their appearance under the Mughals but are generally confined to the rectangular panels encircling the arched openings of the gateways. Under the Mughals, the calligraphic decoration is accomplished with black-stone lettering inscribed on white marble bands (for example, Buland Darwaza, Fatehpur Sikri; the gateway of the Akbar’s Tomb, Sikandra, Agra; and the entrance gate of the TRaj Mahal). The most representative example of calligraphic decoration under the Mughals comes from the facades of the Taj Mahal.

The muqarnas pattern with its distinct Iranian and Timurid antecedents in Mughal architecture, though it seems that it was not the preferred style. The muqarnas lozenges which were developed in ninth-century Iran have their best Mughal example in the tombs at Khusran ‘Bagh, Allahabad, built during the reign of Jahangir. The Mughals, however, employed the indigenous idioms of sculptural form chiaroscuro effect which were based on offsets and recesses, layers of horizontal mouldings, columns and brackets, curved motifs like the pot, lotus flower and myrobalan (amalaka). Yet the typical Jahangiri Chini Khana, motifs based on stunted arch filled with embossed flower designs and wine
goblets and surahis evoke the Iranian symbolism of paradise (see, for example, the Tomb of I’timād-ud-Daula, Tomb of Firuz Khan, gatehouse of Surajbhan ka Bagh, etc., at Agra).

Aesthetically, the tile and faience mosaic of the Iranian style was replaced in Mughal India by the red and white bichromy or marble monochromy which so typical of Akbari structures and monuments (for example, Humayun’s Tomb, Badshahi Darwaza, Jami’ Masjid, Fatehpur Sikri; Jahangiri Mahal, Agra Fort). The Buland Darwaza at Fatehpur Sikri, however, depicts a red-yellow bichromy.

To further Iranian idiomatic innovations, the ‘arch-and-panel’ articulation and the stellate vaults (the Chahartaq) based on cruciform domed chambers, found wide acceptance under the Mughals. Iranian architects of the thirteenth and fourteenth centuries had imposed order on architectonic and decorative forms by a consistent system of articulation which had a five-fold relationship between arch and panel, and arch and arch. In this system the theme was primarily curved and arcuate (arch), and only secondarily rectangular or trabeate-based (panel). By repeating the identical arcuate patterns, the ‘arch-and-panel’ idiom aesthetically and idiomatically unified the surfaces and voids of a structure, while controlling the decoration covering its walls. The five features of its relationship alignment (when the arch symmetrically alternates with a panel or an arch vertically or horizontally), empanelling (arch contained within a panel), multiplication (progressive increase upwards of arches, etc.), enframing (arch framed by arch) and intersecting (arch crossing arch); initially found their way into

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Sultanate architecture (for example, the ‘Alai Darwaza at the Quwwat-ul-Islam), but gained much greater prominence under the Mughals. The most prominent presence of this system is found on the façade and the side bays of the Buland Darwaza at Fatehpur Sikri, the exterior façade of Jahangiri Mahal at Agra Fort and the exterior surface of the Taj Mausoleum. However, in these Mughal structures, the typical Iranian arch-and-panel system was modified by the traditional articulation of wedge-shaped fluted or octagonal shafts technically known as ‘quoins’, which are shaped like columns. These quoin shafts divided the whole area horizontally and acted as pivots for knitting together the planes of the façade.

The arch-and-panel system without the modifying pivotal quoin system is represented in the baradari structure of Muqarrab Khan at Kairana (district Muzaffarnagar); the Tomb of Sultan Nisar Begum at Khusrau Bagh, Allahabad, the Naulakha pavilion and Shah Burj at Lahore Fort; the upper portions of the interior walls of the Divan-i-Khas, Agra Fort; and the Bhadon pavilion at the Delhi Fort.

As far as the chahartaq is concerned, it was formed in Iran through intersecting arches. Generally, a square vaulted camber spanned by four large intersecting arches, resting on massive wide piers, from a cruciform with an open square in the centre. This square is then turned into a polygon or circle with the help of smaller arches, supplemented by decorative ribs rising from the main arches. In this chahartaq plan, the Iranian architects improvised a new type of vaulting system, now generally
known as the Khurasanian vault. The Khurasanian (multi-partite) vault was invoked by the Timurid architects by reviving the Ilkhanid and Seljuq stelliform vault on the system of intersecting arches. This type of vault consists of four large intersecting ribs which create a central vaulted area, four lozenge-shaped squinches and four rectangular fields. In this plan, the centre of each side of the square contains an arched recess, the width of which is equivalent to the diameter of the dome, supported by the four arches which in turn spring from the forward edge of the recess arches, each adjacent pair intersecting to form the square. The secondary ribs springing from the haunches of the arches converts the square into an octagon by a series of lozenge shaped squinches. At the second stage of the phase of transition to the circular dome. With this system the vaulting techniques reach perfection. The need of supporting walls is eliminated and the dome now sits directly on the four arches. The first building based on this pattern was the twelfth-century Jami’Masjid of Isfahan. Under the Timurids, this type of vault was employed in the Bibi Khanum Mosque at Samarqand (1398-1405 A.D./807-15 A.H.), the Musalla of Gauhar Shad at Heart (1417-38 A.D./826-47 A.H.), the Mosque of Turbat-i-Sheikh-i-Jam (1440-43 A.D./849-52 A.H) and the Madrasa (collage) at Khargird (1442 A.D/851 A.H.). In the Mughal empire, we find its occurrence in the imperial Hammam (the so-called Hakim’s Baths), the private Hammaml in the Daulat Khana, the Hammam attached to the Haramsara (‘Jodhbai Palace’), all at Fathepur Sikri, as well as at Akbar’s Khalwatgah-private
palace – in Allahabad Fort, the Babur’s tomb in the garden of Humayun’s Tomb and the Govind Dev Temple at Vrindavan near Mathura (1590 A.D./999 A.H.).

The Kabuli Bagh Mosque of Babur at Panipat and the Kachhpure Mosque of Humayun at Agra, on the other hand, depict the arch netted transition zones in pseudo-structural plaster relief work applied to the pendentives of the small domes of the lateral side bays. These are also later found in the central dome of Humayun’s Tomb and at the Tomb of Tambolan Bagum at Khusaru Bagh, Allahabad. This ‘arch-net’ or ‘squinch-net’ in the form of fake arches in plaster was also inspired by Timurid architecture. The corbelled pendentive concealed by elaborate plaster ribs is first found at the Khanqah (hospice) of Mulla Kalan, Ziyaratgah (1472-1501 A.D./881-901 A.H.). Arch-netting similar to that on Tambolan Begum’s Tomb occurs at the Khanqah (hospice) of Khwaja Zain-ud-Din at Bukhara (sixteenth century).

The chahartaq plan was extensively employed by the Mughals in their mosque and tomb architecture. The naves of the western liwans of the Jami ‘Masjid of Fathepur Sikri and Shahjahanabad (Delhi), and the Badshahi Masjid of Lahore, are all constructed on the chahartaq pattern. The earliest Mughal example is the Kabuli Bagh Mosque (c.1527 A.D./936 A.H.) of Babur at Panipat, where the chahartaq is employed on its central nave. The nave and aisles of the central rooms of Muqarrab Khan’s baradari at Kairana (district Muzaffarnagar) are also constructed on the
chahartaq pattern. The square Mughal tombs, such as the Khusrau Bagh Tombs at Allahabad, are also chahartaq structures.

In Iran and Central Asia (Transoxiana), masonry buildings were constructed with ‘post-and-beam’ (timber) porches. Two prominent examples are ‘Ali Qapu in the Maidan-i-Shah (Naqsh-i-Jahan), Isfahan and the Balyand Mosque in Bukhara. Porches pillared halls raised on slender wooden pillars were known as talar (hall_ in Iran and aiwan (portico) in Transoxiana. In Iran, the term aiwan was used for an open-fronted room with a barrel vault. The use of the term aiwan to designate pillared constructions was adopted by the Mughals. Most such pillared constructions in India took place during the reign of Akbar, the Badgir (‘Hawa Mahal’ louver) of the Jodhbai Palace, the Chahar Suffa ’ (Panch Mahal’), the Aiwankhana (‘Diwan-i-Khas’ or ‘Jewel Treasury’), the entrance to the Naqqara Khana (place where the drums are beaten at fixed intervals) near Hathipol, the Rang Mahal, all at Fathepur Sikri, and the inner quadrangle of the Jahangiri Mahal at Agra Fort, are examples of quadrangular aiwans inspired by Iranian prototypes. This buildings form was also sometimes adapted to an octagonal plan. The ‘Qush-Khana’ near the Ajmeri Darwaza at Fathepur Sikri, the Chihil Sotun in Allahabad Fort and the Shah Burj at Agra Fort are all octagonal aiwans.

Iranian architecture also initiated the expression of the aesthetics of the façade in its portal (pishtaq), an endeavour that was brought to fruition in Turkey and Mughal India. The construction of high pishtaq and aiwans
had long been established in the Iranian tradition. The high pishtaq of
the sanctuary chamber was also an important feature of the Sharqi
architecture of Jaunpur. It has generally been argued that the high
pishtaq of the Mughals, especially under Babur, was a result of the
influence of Sharqi architecture. Parallels have been drawn between the
façade of the Atala Masjid and Jami ‘Masjid, Jaunpur, and the façade of
the Baburi mosques, the Kabuli Bagh Mosque of Panipat, the recently
destroyed Mir Baqi’s Mosque at Ayodhya and the Mir Hindu Beg Mosque
at Sambhal.

A closer look of our sources and a comparison of the plans of these
mosques with Iranian-Timurid structure however unfold a different story.
Before coming to India, Babur had briefly occupied Samarqand (c. 1501
A.D./909 A.H.), and re-occupied it later (1507 A.D./915 A.H.) and
campaigned in Bukhara up till 1511 A.D./919 A.H. The Sambhal Mosque
was constructed by one of his nobles in 1526 A.D./935 A.H. Soon after
his victory at Panipat in 1526 A.D./935 A.H. Babur had ordered the
construction of the Kabuli Bagh Mosque. In 1528-29 A.D./937-38, Mir
Baqi had the Ayodhya Mosque constructed. In 1530 A.D./939 A.H., during
the reign of Humayun (and with four of Mughal conquest) the Kachchpura

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402 - See, for example, Pinder-Wilson, ‘Timurid Architecture’, in Cambridge History of Iran: The Timurid
729, 731;
Brown,
Mosque was constructed. It was too short a time for the Mughals to familiarize themselves with the regional architectural traditions of India. Further we have noted earlier Babur had been accompanied to India by two master masons that were well-versed in the Timurid traditions of architecture.

If we compare the plan of the Kabuli Bagh Mosque and the Kachhpura Mosque with the Namazgah Mosque at Qarshi, a town southwest of Samarqand, we encounter a striking similarity of style and planning. In all the Baburi and Humayuni mosques, as in the Qarshi mosque, we find the high peshtaq, Chahartaq nave and lower lateral wings with four domed bays. It is also interesting to note that in his memoirs, Babur mentions the town of Qarshi near Samarqand. Coupled with the existence of the typical Timurid feature of archnetted transition zones in pseudo-structural plaster relief covering the pendentives, we can safely assume that these mosques took shape under the Iranian-Timurid influence.

The high peshtaq subsequently emerged as the hallmark of Mughal architecture, not only in mosque but also in tomb construction. The earliest Mughal tombs with elongated peshtaq are the Sabz Burj and Nili Gumbad near Humayun’s Tomb. As far as the ground-plan is concerned, the Mughal mosque closely followed the Iranian anxiomorphic prototypes. By the fourteenth century,

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404 - Babur Nama, p. 84.
405 - For details on these tombs, see: Ebba Koch, ‘Mughal Architecture’, pp. 36-37.
the Iranian architects had perfected the two-and four-aiwan (open-fronted construction with a barrel vault). The form of the two-aiwan mosque was achieved by having the sanctuary chamber with a high peshtaq preceded by an enclosed open quadrangle. The entrance portal (aiwan of the Iranian architecture) was constructed on the same axis as the peshtaq. The centrally located courtyard, which was also an indigenous idiom, was surrounded by double-storeyed cloisters (Rawaq). Under the Mughals, this Iranian-Timurid prototype was used in conjunction with Delhi Sultanate elements to produce a new form. Thus, in the Khair-ul-Manazil Mosque at Delhi we find that the tall peshtaq of the western aiwan and the double-storeyed rawaq are typically Timurid. The single-aisled western aiwan was itself built on Delhi Sultanate traditions. As in the Iranian examples, this single-aisled, five-bayed mosque has a single dome. In the Akbari Masjid near the Ajmer Dargah, the western aiwan with multiple aisles and dominant dome over the nave is Timurid, while the low single-aisle cloisters are typical of Delhi Sultanate architecture. The Jami’ Masjid of Fathpur Sikri is again a two-aiwan mosque, which acquired its third portal (Buland Darwaza) at a later stage.

By the twelfth century the four-aiwan congregational mosque with domed chamber and cloisters had been perfected in Iran. In fact, it was the Jami’Masjid at Varamin (1322-26 A.D./731-35 A.H.) which established the general plan for the subsequent Jami; Masjids of Iran. In this type of mosque a harmonious synthesis of such traditional elements as the

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aiwan, the four-aiwan court and aiwan-dome combination was effected. The courtyard was farmed by cloisters (usually doubled-storeyed) of equal height, on three sides, while the prayer chamber (western liwan) was given a heightened importance through its crowning dome and a higher peshtaq. In the middle of each of the other three arched faces of the interior court, an aiwan (in the form of an arched and vaulted niche) is introduced. As in the overall plan, these four aiwans can be seen as the arms of a cross. This type of mosque plan has been termed a cruciform plan.

The cruciform or four-aiwan mosque made its appearance in India during the Sultanate period supra). Under the Mughal it is first encountered during the reign of Jahangir, but it became popular during the reign of Shahjahan. The first cruciform mosque constructed under the Mughals appears to be the Begum Shahi Mosque at Lahore (1611-14 A.D./1-20-23 A.H.). The second mosque on the same plan is the Vazir Khan Mosque (1634-35 A.D./1-43-44 A.H.), again at Lahore. Later, the Jami; Masjids of Agra and Shahjahanabad were also constructed on the same pattern.

Contrary to the Iranian four-aiwan mosques, these Mughal mosques emphasized the importance of the sanctuary by tending to size and width of the latter. The Vazir Khan Mosque has two other changes. As the Taj Mahal, this mosque has an additional court in front of the entrances (Jilau Khana) which acted as a bazaar (market). Secondly, the
transverse aiwans of this mosque are no longer open-fronted in the Iranian manner, but are gate-houses with doors\textsuperscript{407}.

Iranian architects and builders of the fourteenth century had also developed a technique for providing domed roofing to long rectangular structures. This was the technique of applying transverse arches and groin vaults\textsuperscript{408}. In such construction the rectangular space to be covered was divided into square units by crossing it transversely from one longitudinal wall to the other. Short arches were applied to bridge the transverse arches, and provide the base for the domical vaults erected on the top. The in-filled spaces between the transverse arches were pierced with windows to let in light. This technique made its appearance in Eastern Iran where it was adopted in \textit{Masjid-i-Kirmani} near the Tomb of \textit{Tomb of Turabt-i-Sheikh}\textsuperscript{409}. It is then found in such religious structures as the oratory near the \textit{Jami'} Masjid at Yazd and the Tomb of \textit{Sheikh Ahmad-i-Yasavi} in Turkistan. In India we find one example of this kind of elongated vaulted structure from the reign of \textit{Shahjahan}. But here it is in the form of a Safavid-inspired bazaar (market), the \textit{bazaar-in-musaqqaf} (the roofed-market). This unique structure is the covered bazaar adjoining the \textit{Lahori Darwaza} of the Delhi Fort.

\textsuperscript{407} For the non-Iranian influences on the Mughal congregational mosque, see: Jose Pereira, ‘Islamic Sacres Architecture’, pp. 231-32.
One of the most important axiomorphic impresses of Iranian tradition on Mughal architecture was in the form of the plan which has been labeled Hasht Bhisht or noni-partite plan\(^{410}\). In this plan the layout, which is preferably an irregular octagon (a chamfered square-Musamman-i-Baghdadi), is divided by four intersecting constructional lines into nine parts, comprising a domed octagonal chamber in the centre, rectangular open halls (in the form of either peshtaq or flat-roofed aiwans supported by pillars) and double-storeyed octagonal vaulted chambers in the corners. This plan provided the buildings a radial symmetry which hitherto was missing. The radial symmetry was further emphasized by the axial and radial passages which linked the nine chambers which each other. Typical Timurid examples of this were the Tomb of Abu Nasr-i-Parsa at Balkh (c.1460 A.D./849 A.H.), the Ishrat Khana at Samarqand (c. 1464 A.D./873 A.H.) and the Tomb of Sharif ‘Abd Ullah at Heart (c.1487 A.D./896 A.H.). A direct influence of the Tomb of Abu Nasr-i-Parsa is found during the Mughal period in at least four tombs, three of which are in Delhi. The Sabz Burj and Nili Gumbad Tombs (c.1560 A.D./969 A.H.), again at Delhi, and the Tomb of Shamshir Khan at Batala (1588-89 A.D./997-8 A.H.) have a noni-partite plan with angular units as semi-octagonal niches. As at the Abu Nasr Tomb, their central chamber is on a square plan.

The most famous Mughal monumental funerary structures constructed on this Timurid plan are the Humayun's Tomb at Delhi and the Taj Mahal at Agra. The plan of Humayun’s Tomb also appears to have been inspired from a ‘boat-house’ which, according to Humayun’s court historian, was contrived on the orders of the emperor himself, Khwand Amir writes: “Of all the wonderful innovations (Ikhtara’at) prepared in that time on the Imperial orders, which owing to their novelty (gharaib) and beauty (nozhat) have spread to all parts of the world was the one which on royal directions, the royal carpenters constructed with the help of four boats in the river Jamuna (Jayhun). On each of these (boats) were constructed platforms saffa) which are double-storeyed chhartaq of elegant style. These four boats were joined with each other in such a way that these chahartaq (platforms) face each other. And in between each two of the four boats, another apartment (taq) was produced. Consequently an octagonal tank (hauz) resulted in the middle. And these chahartaq were decorated with fine cloths and other valuable objects, due to which the mind of the intelligent aql-i-darrak) would be amazed by its beauty and magnificence”411.

If we compare the plan of Humayun’s Tomb, which was designed by Mirza Ghiyas, the master architect who had accompanied Babur to India, the tomb appears to be a copy of Humayun’s boat-house. The chahartaq of the boat pavilions were transformed into stone double-

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storeyed vaulted octagonal corner chambers. The four ‘apartments’
connecting the boats were transformed into rectangular side chambers,
and the central octagonal tank was now transformed into the octagonal
domed sepulchral chamber. The Taj Mahal, on the other hand, is a single
Baghdadi octagon (chamfered square) laid out in the typical noni-partite
plan. The Iranian axiomorphics are brilliantly coupled with indigenous
idiomatic and aesthetics.

Another example of a noni-partite tomb is the Tomb of Anarkali at
Lahore, which, again, is one of the most ingeniously planned at Mughal
structures.

The noni-partite plan was also applied by the Mughals to tombs
which were regular octagons. The Tomb of Shah Quli Khan at Nurnaul,
the Tomb of Haji Muhammad at Sirhind and the Tomb of Qutb-ud-Din
Muhammad Khan at Vadodara are some of the funerary structures of
Akbar’s reign which were regular octagons with noni-partite plans.

This plan was applied to palace buildings like Akbar’s pavilion at
the Ajmer Fort and the Bulan Darwaza at Fathpur Sikri, and Rani ka Mahal
at Allahabad Fort. Pleasure pavilions and water palaces like the Hada
Mahal at Fathpur Sikri, Shah Quli’s Water Palace at Nurnaul and I’timad
Khan’s Water Palace (popularly known as Burhia ka Tal) at Etmadpur
(Agra) were also constructed on this pattern.

The noni-partite plan was also applied to square structures.
Akbar’s Ajmer Pavilion and Shah Quli’s Water Palace were square
structures. The best example of this type is, however, the Tomb of I’timad-ud-Daula at Agra. These square noni-partite structures were probably constructed in the style of the Khanghah (monastery) of Qasim Sheikh at Kermin, Bukhara and the Tomb of Ulugh Beg and ‘Abd-ur-Razzaq in the vicinity of Ghazni.

This plan was applied a large number of Mughal Hammams (hot-bath), for example, the Hammama of ‘Abd-ur-Rahim Khan-i-Khanan at Burhampur and the imperial Hammam at Fathpur Sikri.

From the above description it thus appears that the medieval Indian architects and planners, especially those of the Mughal period, heavily borrowed their idiomatic, axiomorphic and aesthetic traditions from Iran. The beauty and uniqueness of the medieval Indian and Mughal architecture, however, was owing to these inspirations being intelligently synthesized with older indigenous elements. This synthetic tendency is seen at its best in the Taj Mahal, making it one of the best architectural achievements of world civilization.

Some Iranian architecture in India:

‘Ali Reza Isfahani:

Maulana Ali reza Sufi Ma’mur was the great architect of Isfahan. He was very clever and intelligent, learnt most of the current sciences of his time and was also known of his proficiency in architecture. He migrated to India in 1017 A.H./1608 A.D. For traveling ‘Ali Isfahani traveled to many parts of India. Auhadi met him at Agra in 1024
A.H./1615 A.D. and testifies that he also wrote several poems with Simgol as his takhallus (mum de gnerre)\textsuperscript{412}.

**Mir ‘Abd-ul-Karim Mamuri Isfahani:**

He belonged to Mamuri Sayyids of Isfahan\textsuperscript{413}. He was a noted architect. In 1615 A.D./1024 A.H. he was sent to Mandu with orders to construct new buildings for imperial use and to repair the buildings of the previous Sultans\textsuperscript{414}. Accordingly, in about a year’s time Mir ‘Abd-ul-Karim got some old buildings repaired and a few new ones constructed. Besides, he constructed in the city a whole new building on which Rs.3 lakh were spent\textsuperscript{415}. When the emperor visited these buildings he granted to Mir ‘Abd-ul-Karim the rank of 800 zat (troops) and 400 sawar (cavalry) along with the title of Ma’mur Khan\textsuperscript{416}. He is also said to have constructed buildings at Lahore at an expense of 7 lakh rupees in 1620 A.D./1029 A.H.\textsuperscript{417} The famous poet and historian Chandra Bhan Brahmin was in his services at Lahore\textsuperscript{418}.

It seems that on the death of Jahangir Mir ‘Abd-ul-Karim was appointed Divan (royal office) of Punjab and was removed in 1631 A.D./1040 A.H by Hakim Jamala-i-Khan\textsuperscript{419}. In 1633 A.D./1042 A.H. he was appointed Darogha-i-’Imarat (Superintendent of buildings) and

\textsuperscript{412} T. Auhadi, Fol. 511.
\textsuperscript{413} A.G. Ma’ani, 1990, Vol. I, p. 244.
\textsuperscript{414} Tuzuk, Tr. By Rogers, Vol. I, p. 368.
\textsuperscript{415} Tuzuk, ed. Sir Sayyid, Ghazipur, 1863, pp. 179-180.
\textsuperscript{416} Tuzuk, Tr. By Rogers, Vol. I, p. 368.
\textsuperscript{417} Tuzuk, 1863, p. 318.
In 1634 A.D./1043 A.H. he was promoted to the rank of 1000 zat (troops), 200 sawar (cavalry). In 1635 A.D./1047 A.H., he was given a promotion to 1,500 zat (troops) 1200 sawar (cavalry). He was employed in the construction of the Taj Mahal, along with Mulla Murshid-i-Shirazi, Makramat Khan. In 1655 A.D./1064 A.H., it is mentioned that he held four posts: Bakshshi (paymaster), Waqi’s Navis (events writers) Darogha of buildings (Superintendent of buildings) and Mir-i-Bahr (admiral) of Agra. In these posts he was succeeded by Muttalib, son of Mu’tamid Khan.