

Central Courtyard in Traditional Mosques of Iran

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Abstract

Although the "central courtyard" or "Sahn"—as an important part of Iranian mosques with its formal, conceptual, and functional richness—provides a unique spatial experience for worshippers, little research has been conducted on its qualitative and quantitative characteristics. The consequence of this lack of sufficient knowledge is that in today's mosques, either the central courtyard is eliminated altogether or if it exists, it fails to create a favorable spatial quality. The present article aims to acquire a better knowledge of Sahn by studying it from various perspectives so as to determine its effectiveness on architecture and spatial quality. The field and library study methodology was used, and the collected data was obtained by analyzing the architecture of different mosques in Iran and by making comparisons with mosques in other countries. The results indicate that Sahn exert a fundamental influence in a mosque, and that eliminating or reducing its role in contemporary mosques has led to the deterioration of spatial quality.

Keywords: Mosque, Sahn, Function, Spatial quality.

1. Introduction

The "central courtyard" or "Sahn" has played a significant role in traditional mosques in Iran. From inside the Sahn, the viewer obtains a general understanding of the space and architecture of the mosque. Prophet Mohammad is quoted as saying, "Mosque is wherever you pray." Therefore, no specific architectural elements or facilities are required to convert a given space into a mosque. However, research shows that "[c]ontinuous use of specific elements and spaces in mosques throughout history has played an important role in creating an image of them in the minds of the users" (Falahat, 1384: 41). Therefore, although from a religious perspective a courtyard is not compulsory (many traditional and contemporary mosques do not have a Sahn), the existence of this architectural space in the first mosque (Medina mosque) and the continuous use thereof in later examples throughout history are indicative of the role and importance of Sahn in a mosque.

Despite the historical background of Sahn and its significant physical effects in the spatial structure of a mosque, it is being used less frequently in recently built mosques. The main reasons for this are "the maximum land use, providing quick access from the street to shabestan and insufficient knowledge of the role and significance of yard in mosques." (Aminzadeh Goharrizi, 1378: 34) Conceptual changes of "space" in the contemporary Iranian architecture, reduced urban functionality of Sahn, and the neglect of spatial quality and "introversion" in mosques are other reasons cited for this physical change. A particular example of inattention to the importance of Sahn may be observed in the mosques built around the Tehran's Bazaar. "The servants of these mosques point out that in recent years, lucrative trading has consistently dominated the market, leaving little room for developing religious spaces. Owing to the astronomical figures offered for land in the Bazaar, parts of mosques' yard are often subjected to highly profitable interactions. This has recently led to the reduction of open space in many mosques and simultaneous development of trading chambers." (Emadi, 1377: 81)

In this study, an effort was made to answer the following questions upon examining the importance, the meaning, and the function of the Sahn in the architecture of various mosques:

- 1- Has the Sahn influenced the ultimate goal of building the mosques?
- 2- Does elimination of the Sahn in Iranian mosques reduce their spatial quality?
- 3- Would the mere existence of a courtyard, irrespective of its geometry, shape or structure, cause the promotion of mosques' spatial quality?

2. Methodology

In order to answer these questions and to analyze the criteria of courtyards in traditional mosques, with an interpretive and comparative approach, the author first focused on the quantitative characteristics, the historical role, and the respective relations between the Sahn and the urban area, nature, and climate, based on data from the Cultural Heritage Organization in Iran and library studies. Then field trips to some Iranian, Turkish and Indian mosques were carried out to analyze the architecture and spatial qualities of mosques, making relevant comparisons where necessary.

3. Historical Background

Including courtyards in the design of "religious buildings" traces back to ancient times. For example, "the plan of Egyptian temples from the third millennium B.C., emerging from the heart of ritual requirements, consisted of a courtyard with three pillared sides, columned hall and sanctorum (the holy of holies)" (Gardner, 2008: 88). Another example of religious buildings with courtyards is the rectangular Basilica churches from the early Christian era, in which the open area is a telltale approach to the seraglio, which was deemed sacred even if regularly left unused for worship (Hillen Brand, 2004: 55).

The primitive mosques, probably mimicking the mosque of Medina, were built with a courtyard. "For long periods, Mosques with a courtyard remained the only model for construction of Jameh mosques" (Behomilol Prochazka, 1994: 18). Although, sometimes important mosques such as Fustat and Al-Aqsa mosque or other mosques in a small community or with cold climates were built without any courtyard, in most Islamic nations around the world, such as Yemen, Pakistan, India, Bahrain, Tunisia, and Iraq, the Sahn was an integral part of mosque architecture.

"Buildings with a courtyard in Iran date back to around eight thousand years ago. Various buildings and houses in particular have gone through roughly six thousand years before they developed into the perfect central courtyard" (Memarian, 2005: 16). The ancient houses in Teppe Zagheh, the burned building at Teppe Hissar in Damghan, Parthian palaces such as the Assyrian Palace, temples and palaces from the Sassanid era, such as Sarvestan, Kasra, Firuzabad, are examples of buildings with a courtyard prior to the emergence of Islam in Iran. "The construction of buildings with a central courtyard continued throughout the Islamic period and a few of the earliest mosques were built in this form. There are several important remnants based on such designs, including Fahraj Jameh Mosque, Tarikhane Mosque in Damghan and Nain Jameh Mosque" (Memarian, 2005: 23). The courtyard, however, was eliminated in some mosques owing to the harsh climate and cold weather, such as in the Blue Mosque in Tabriz, and in some others owing to adjacency to a plaza working sufficiently as a yard, such as the Sheikh Lotfollah Mosque in Isfahan.

The courtyard of Iranian mosques, have been described in many historical books and itinerary documents. In his book entitled "Tohfatal alam," Mir Abdol Latif Khan Shushtari described the courtyard at the Shushtar Jameh Mosque as follows: "The mosque entails an excellently vast seraglio and a very large courtyard at the middle of which there is a lake-like pond surrounded by several platforms upon which the morning and evening prayers are performed during Tammuz (Hebrew month). I do not exactly remember the width, length and height of the mosque, but the seraglio could be estimated to accommodate two to three thousand people for prayers, the same capacity applied to the courtyard (Shoushtari, 1984: 71).

Until the Seljuk era, the pattern of courtyard in the hypostyle mosques was one-sided or central. In the one-sided type, the courtyard was situated on one side of the land and all around the courtyard, there were several verandas built in one, two, three, or four wings. Apart from their functionality, these emphasized the enclosed space of the courtyard. The central courtyard was situated in the middle of the land and surrounded by enclosed spaces (Aminzadeh Goharrizi, 1999: 35). "From the fifth century AD onwards, however, a new pattern emerged in the heart of the desert rooted in the architecture of pre-Islamic Iran. Since then, the general type of four-iwan as the symbol of Iranian architecture became the pattern of mosques across the whole country." (Motedayen, 1999: 84) As such, the courtyard expands through four-iwan from four sides and creating a farther open space in connection with the central courtyard. This pattern, known as "expanded central courtyard," was applied as the dominant form on many mosques in Muslim regions, especially Iran, India, and Central Asia (Aminzadeh Goharrizi, 1999: 35) (Figure 1). The poor progressive continuity of the Iranian mosque architecture is set out in the second Pahlavi era. During this period, there were modern mosques constructed beside traditional mosques, in which the courtyard was either completely eliminated or lost the function and identity of the previous pattern, often failing to follow a particular structure and order.

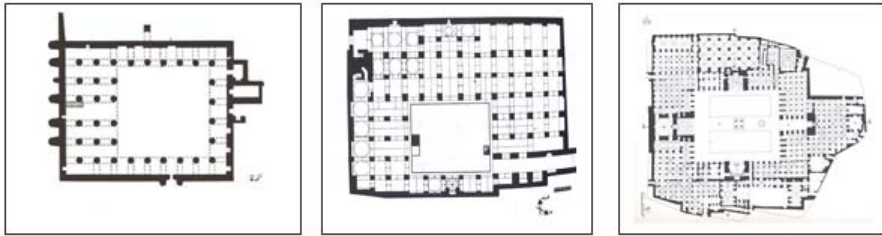


Figure 1: 3 types of Sahn. Left: Tarikhane Damghan, one-sided type, Middel: Jame nayin, central type, Right: Jame Isfahan, expanded type.

4. Geometry

Despite numerous developments in the shape and structure of the mosques, the Sahn has retained its overall form. The shape of a courtyard was free of the land piece upon which the mosque was built. Because of being subject to natural landscape factors, the mosque land usually adopted an irregular geometry, while the inner courtyard was invariably constructed in the form of a rectangle or almost-square, stretching in the direction or perpendicular to Qibla (Figure 2). Considerable diversity can be found in the size of such rectangular courtyards. One example of small courtyards is seen in Jajrom Jameh Mosque (fourth or fifth century AD), with dimensions of approximately 5.7×5.7 meters, which works only as the entrance space to the shabestan. An example of majestic courtyards is found in Masjid-No in Shiraz, with dimensions of approximately 74.9×148.5 meters and a capacity of thousands of worshippers.

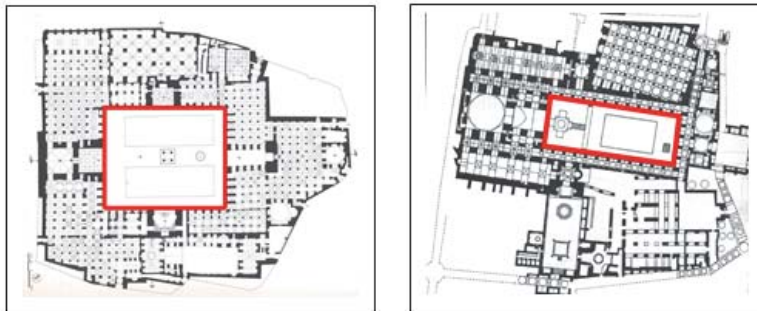


Figure 2: The rectangle shap of the courtyard was free of the mosque overall plan. Left: Jame Isfahan, Right: Jame Yazd.

The visual impact of the courtyard on the viewer depends largely upon its dimensions (Hillen Brand, 2004: 55). Unfortunately, little research has been conducted on the exact size of the courtyards in mosques. In some cases, such as mosques in Isfahan, "the analysis of the dimensions of the mosques reveals the certain relations in aspects ratio of the courtyard. In these mosques, the length to width ratio of the building is in most cases close to 1:1 where a sense of square space is invoked to the viewer facing the courtyard. The maximum length to width ratio of the courtyard never exceeds 2. The only exception is Sheikh Lotfollah Mosque where the open space, i.e., Naqsh-e Jahan Square, has a roughly 1:3 dimensions." (Ahari and Habibi, 1998: 26) "In some cases, such as Imam Mosque in Isfahan, the proportions of the various components in the courtyard are based on the Pythagoras rectangular with an aspect ratio of 3:4 and diagonal of 5. Stierlin discovered the relationship between the application of these numbers and the Shia holy numbers." (Memarian, 2005: 543)

The sense of being surrounded in space depends upon the distance between the building elevation and the viewer's eye. "It can be argued that the external space has been adequately enclosed when the building elevation to spatial width ratio is $\frac{1}{2}$, $\frac{1}{3}$ to $\frac{1}{4}$. If the ratio is less than $\frac{1}{4}$, the enclosure characteristics of the space will disappear." (Tavasoli, 1989: 52) Hence, numerous local mosques or small mosques like the Forumad Jameh Mosque, Miremad in

Kashan, and Firuzabad in Meybod, in which the height-to-width ratio of the inner courtyard is more than $\frac{1}{4}$, there is a strong sense of spatial enclosure. However, other mosques, such as the Seyed Mosque in Isfahan, Vakil in Shiraz, and Malek in Kerman with large courtyards, in which the height to width ratio is less than $\frac{1}{4}$ and there is an extra-local function at urban scale, the purpose is not to create an enclosure, but rather a sense of vastness of the mosque courtyard, so as to provide a vast, open space in which prayers may be conducted without any distractions and without barriers to communication with the sky and the universe (Ahari and Habibi, 1998: 26).

5. Sahn Architecture

"In mosque architecture, Sahn is an 'empty' space limited and defined by 'full' spaces and the combination of the empty and full spaces makes a whole unit." (Olia, 2004: 40). A large part of mosque architecture is conceived through the Sahn. The plain outward appearance that does not include the dome, minarets and entrance and lacks decorations, highlights the role of the interior yard in the understanding of mosque architecture. "Sahn gives the freedom of action to the architect which he/she lacks in places other than the mosque. The architect is able to design all of the details of the building (including its interaction with its immediate surrounding) free of limitations imposed by the nonreligious architecture outside of the mosque." (Hillen Brand, 2004: 122)

The simplest, purest form of yard, which is usually a square or rectangle and "is almost always sized to give a full view of the Shabestan" (Zargar, 2007: 57) provides the architect with four perpendicular views and is completely perceivable by the viewer in a 360-degree turn. The Iranian handicraft creates beautiful patterns and designs on walls, dome coatings, muqarnas work, and arcades and embeds peerless masterpieces in the body of yards through Garih tiles, flower work, node work, and brickwork. The Sahn is surrounded by a variety of spaces, such as the bedchamber, iwan, chamber, arcade, and sometimes-elevated back yards. Repetitive arcades, symmetrical views, and iwans located precisely in the middle of the facade impart order to the various elements of the building facade.



Figure 3: Imam Isfahan mosque with 4 Iwans

In the most perfect form of Iranian mosques, a cross-like plan is created with four elevated iwans, which stress the centrality of the yard along with a pond or a water work at the heart of the yard. "Unlike the Arabic mosques, the yard in the Iranian mosque is not just the link between different functions of the mosque. It rather acts as the most important component of the building. It seems that all of the mosque elements start from this central point. Therefore, human finds himself at the center of such a space by considering the decorations and proportions of iwans at the heart of a sacred space, where the dome resembles the dome of heavens." (Motedayen, 1999: 87) (Figure 3)

6. The Sahn as an Urban Space

Throughout the history of the development of Islamic cities, mosques have functioned as one of the most important public spaces, housing social, economic, and political events. The lack of public spaces such as agoras, forums, theaters, stadiums and halls of justice in an Islamic city emphasize the social role of the mosque.

"The location of mosques as the principal element at downtown or community centers across major passages is clearly evident in the construction of Iranian cities. However, the basic argument here concentrates on the mosques with a courtyard at which major and minor passages terminate. This spatial feature is powerful, despite the presence of doors that can classify the mosque courtyards as public spaces." (Tavasoli and Bonyadi, 2007: 49) "For the mosque whose function was either local or extra-local and there was additional functions more than praying, access points increased and

through two or more entrance can reach to it. In this scenario, mosque has become part of the urban space where the inner courtyard is signified by its additional functions." (Ahari and Habibi, 1998: 29) "The link between these mosques and the surroundings was often so strong that they created a gateway where the courtyard was considered the local backyard or the city plaza." (Arzhmand et al., 1998: 56) For instance, in the Imam Mosque of Tehran Great Bazaar, "the entrances and courtyard act as an urban open space and providing an active passageway. Each of these entrances connects through a portico and several surrounding corridors to the great courtyard of the mosque, which in fact seems that the northern courtyard and the communication ways with the market constitute an integral part of the business environment." (Emadi, 1998: 79)



Figure 4: Hierarchy of public spaces in Shiraz during the Atabak era
Reference: Ranjbar et al., 2011: 39

The link between the Sahn and other public functions in the city, along with development of an integrated network of public spaces, enhance the quality of and social activities in the courtyard. "In the recent literature of urban design, achievement of an integrated structure of urban public spaces has been noted as an important step taken towards achieving sustainable urban development and also improving the quality of urban public spaces." (Ranjbar et al., 2011: 33) "Urban measures taken during the Persian Atabak period (sixth and seventh century AH) in Shiraz was one of the most important references in the formation of such network based on the mosque courtyard" (Ranjbar et al., 2011: 33). "The Atabakan applied market as a dynamic public space for connecting to new spaces where a dynamic hub was built inside the city developed within a hierarchy from the mosque courtyards, plazas, small public squares and marketplaces." (Ibid: 39) (Figure 4) "The overall model of development over this period constituted an axis perpendicular to that of the market and in the direction of the axis of developments in the Buyid dynasty. One side of the axis was Aghigh Jameh Mosque and the other was, Masjid-No." (Ibid: 38)

7. Mosque Courtyard Beyond Climates

Undoubtedly, environmental conditions were one of the most important factors contributing to the formation of the central courtyard in mosques. For example, "in the arid regions across Iran which covers approximately two thirds of the total area, the mosque courtyard created a central microclimate space. The availability of shade during hot days prevented temperature rises due to sunlight while cooling down the pond water and the garden plants, from which the evaporation worked as an air conditioner. Similarly in winter, the courtyard prevented the cold winds, by means of the surrounding verandas and chambers, from blowing inside the mosque, thus keeping warm against chilling weathers." (Tabbaz, 1998: 86)

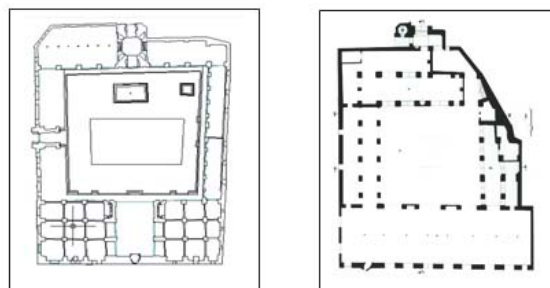


Figure 5: Right: Amol Jameh Mosque. Left: Sari Jameh Mosque.
Reference: Tabbaz, 2000: 212

However, in many regions throughout Iran where the Sahn was not climatically essential, there are numerous examples of mosques with a central courtyard pattern. The exemplary mosques in this respect include Akbarieh in Lahijan, Sari, and Amol Jameh Mosques (Figure 5). In these mosques, "the general principals of building mosques like central courtyard, porticos, domed ceilings etcetera never hindered the concern with climate issues, but were rather taken into account as climatic necessities of the environment in different ways. For instance, although the apparent shape of the mosque boils down to the 'central courtyard', the building constitutes one layer opening from every direction to other courtyards or open streets." (Tahbaz, 1990: 218) Therefore, it can be argued that factors beyond climate contributed to physical shaping of mosques. Functions, values, beliefs and symbolic concepts such as unity are among the decisive factors leading to construction of a central courtyard at mosques in a variety of geographical and environmental contexts.

8. Nature in the Sahn

The environmental conditions and the historical background of Iran have continuously focusing on the importance of nature. With the advent of Islam, the significance of nature increased exponentially through verses in the Quran and the Prophet's emphasis on conservation of nature. "Earth, sky, water, sun, moon and stars are words mentioned in the holy book of Quran for 461, 305, 53, 33, 27 and 13 times, respectively. God has sworn to natural elements which demonstrate their importance and sanctity, inviting Muslims are to watch and contemplate over the natural elements so as to realize the greatness and power of God." (Inanloo Da-ali-loo and Faraji, 2000: 41)

"The central courtyards, where the four sides are perpendicular to the direction of the sunlight, have created a regular quadrilateral opening the top edge of which ends toward the sky and at the center of which sits the water. The sun during the day and the moon and stars at night are all visible. This space somehow symbolizing a sense of place and the center of the universe can portray the passage of time (i.e., days, seasons, years...)." (Ahmadi, 2005: 94)

In Quranic verse 11 of Sura Al-anfal, God says: "God sent down water from the sky so as to cleanse you." Water in the mosque is of noble dignity as a symbol of purity and cleanliness, flowing inside a well-formed pond often located at the center of the courtyard. "Pond is a key element found in the inner open space of most mosques, except in the cases where the open space is so packed there is no room for devising an outdoor pond. Often built in the middle of the courtyard, a pool is where ablution is performed while pigeons and other birds drink water mass. It serves as a decorative element and urban furniture for breaking down the field of view and shrinking the spatial dimensions of the mosque courtyard for passersby." (Ahari and Habibi, 1998: 33)

Although many historians regard the planting of trees in a mosque as disparaging, "there were orange trees and palms planted at mosques in Syria, Egypt, Cairo, the Arabian Peninsula and Spain observed and recorded by tourists living in 9th to 14th century." (Ragol, 2012: 8) Although there are examples of planted trees in mosques in Iran, such as Masjid-No in Shiraz, "most of the open spaces inside the mosques are plant-free. This can be explained in several ways, including the fact that the courtyard which use for praying or as a pathway at the same time, need an integrated space." (Ahari and Habibi, 1998: 33)

"But how could the mosque courtyard without any planted trees reflect the image of heaven? Here, the external bodies or views overlooking the courtyard assumed the task of transferring the message. These bodies recall an abstract of heavenly gardens and botanical paintings through beautiful, seven-color mosaic tiles or faience patterns in green, blue and cyan." (Memarian, 2005: 551). "In addition, there is a pool at the middle of the courtyard reminding the parallel role of garden fountains. Such a water mirror constitutes the iconic source of plants covering the courtyard walls like trellis. Therefore, mosque is a garden depicting the symbolic role of paradise as described in Quran." (Stierlin, 1998:161)

9. Spatial Quality

Although the distinctive physical characteristic of the yard—a roofless space—is common in buildings worldwide, the spatial and environmental qualities of this element vary from building to building. Rather than a plain physical space, the yard in traditional mosques in Iran is both an interior and an exterior space: It is an exterior space in relation to the surrounding spaces and an interior space as it covers by sky." (Memarian, 2005: 540)

"In ordering spaces in mosques a hierarchy is followed that ends to perfection. The entrance and forecourt are placed at the beginning and are followed by a vestibule (or Keryas), which manifests the heart of building, the yard. Next, the corridors that end to the yard and the dome house, which is the most important space in this set, is placed in the alcove of yard." (Arzhmand et al., 1998: 59) "Omission of the Sahn from the mosque architecture and establishment of a direct link between the outside world and the inside of the mosque in the modern designs have drastically influenced the hierarchy of faithful humans' move from the outside to the inside world. The new designs not only reduce the sanctum

and attributes of the interior space of the mosque, but also have negative effects on the facilities and measures required for ensuring the presence of mind of the faithful and their peace of mind." (Aminzadeh Gohar-rizi, 1999: 36) For instance, "the linear order of the spaces of Al-Qadir Mosque (Figure 6) could naturally a hierarchy of access points. However, the main entrance to this building, which is located in the South, take the person to the main space and focal point of the mosque without taking him through a hierarchy. Hence, the covered yard and shabestan are not as transition stages leading to the dome house, in this design and are turned into abandoned useless parts of the building" (Naghsh Consulting Engineering, 2008: 143).

The spatial order of Iranian mosques reinforces the 'introversion' and 'centralization' aspects. This unique characteristic of Iranian mosques is evident when compared with Anatolian mosques. In the architecture of Iranian mosques, the courtyard is located at the center and is surrounded by important spaces, such as the dome house, Iwan, and bedchamber (shabestan). However, "in Anatolian mosques, which were built by Sinan in the Abbasid era, the courtyard is surrounded by porticos and constitutes almost half the mosque. The other half is occupied by the dome, which lies adjacent to the qibla." (Hillen Brand, 2004: 91). Therefore, in such mosques the yard is not surrounded by several spaces and thus, in spite of the resulting confinement, the 'introversion' and 'centralization' aspects are not stressed to a similar degree as in Iranian mosques (Figure 7).

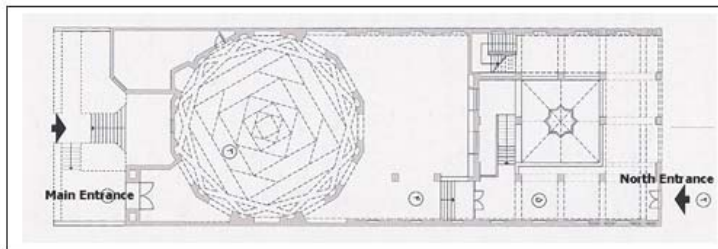


Figure 6: Al Ghadir Mosque, Tehran, 1987.

Reference: Naqsh Consulting Engineering, 2008, 140.

Another interesting example of the difference in the spatial quality of yards can be seen in Jama Masjid of Delhi. This mosque is one of the major examples of four-porch mosques with a courtyard in India. "Sahn of this mosque is confined by shallow and half-covered porticos (with a roof and open on both sides) that connect the entrance of the mosque to the shabestan. In most mosques of the world, such spaces open to the Sahn. However, in Jama Masjid of Delhi the porticos also open to the city to connect the interior area of the mosque to the city space and create a beautiful panorama of the city." (Pourjafar, 2000: 151) The openness of the porticos surrounding the Sahn to the outer space, the existence of entrances on three sides, and the visual and physical transition from inside of the mosque to the outside and vice versa, connect the interior space of the mosque to the urban space. Such a connection not only imbues the building with a sense of popularity and lightness, but also reduces the confinement, introversion, and centralization of the mosque (Figure 8).

In the most perfect form of Iranian mosques, with the construction of four porches (4 iwani), the centrality of the central courtyard is stressed. "Four iwans are built to represent the four pillars of the world. Therefore, a cross-like geometrical axis, which shows the four directions of the pillars of the world, ends to four symbolic pillars or iwans. The pond, which is situated at the center of the yard, reflects the view of bedchambers, iwans and the sky. In this design space finds a whole new meaning. The mosque which is oriented based on two cross-like axes suddenly owns a perpendicular axis that links the earth to the sky by passing through the center of the pond." (Memarian, 2005: 541) These six axes that meet at the center of the yard emphasize the centrality of the yard. These axes create a sense of tranquility and safety in combination with the symmetrical proportionate and harmonic views and thus lead to durability and induce a tendency for perceiving and thinking in humans.

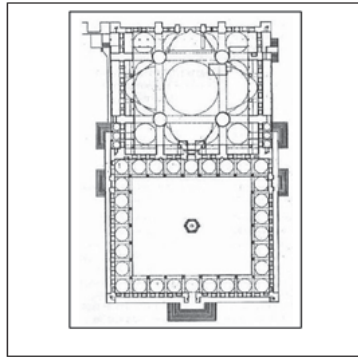


Figure 7: Sultan Ahmed Mosque, stanbul.

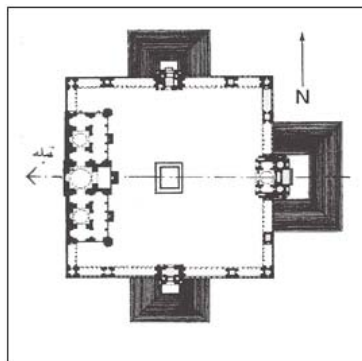


Figure 8: Jama masjid, Delhi

Spatial expansion and transformation of the static space into a dynamic floating one is another characteristic of the Sahn in four-porch mosques. "The introduction of porches into the four corners of the yard was the first step toward opening the space. Innovations in this regard can be seen in the mosques and schools of Isfahan built in subsequent eras. Two small yards are built in the South East and South West of Imam Mosque of Isfahan. However, the major initiative was taken in Qajar period when several solutions to this problem were proposed. Solutions used for spatial opening and flow include the construction of four or eight belvederes (Mahtabi) at the higher stories of Seyyed mosque-school of Isfahan. These belvederes form a large notch that attracts the attention of the perceiver to the depth of the space." (Ibid, 359)

Unfortunately, despite the inclusion of courtyards in contemporary mosques, the soul of these yards is often lacking in comparison to the rich spatial patterns of the central courtyards in traditional Iranian mosques. "The escape from centralization, the lack of a specific geometrical order, the asymmetrical courtyard and surrounding views turn the central space, which is the center of tranquility and contemplation in traditional designs and is the element that gives order and direction to the other elements of the design, into an open 'accidental' space that lies between closed objects and spaces. Consequently, the yard is limited to a functional element that supplies air, light and access to the closed layer surrounding the yard and underground. In fact, in the traditional Iranian architecture most yards are not the source of design, the center of attention and the place for contemplation and tranquility and therefore are not superior to the closed spaces adjacent to them. In these designs, the yard has a function similar to that of the roofless closed spaces of the mosque." (Naghsh Consulting Engineers, 2008: 36)

10. Conclusion

This study shows that the Sahn has a substantial and determining role in the architecture of Iranian mosques and that it contributes considerably to the attainment of the ultimate goal of mosques: to influence the mind and soul of humans. Although omission of the Sahn affects the quality—especially the spatial hierarchy—of mosques, this does not mean that

it is necessary to incorporate this element into all mosques or that designing the Sahn according to any form, geometry, or structure will necessarily improve the spatial quality of a mosque. Hence, it should be acknowledged that the effects of the Sahn on humans, including tranquility, concentration, presence of mind and heart, introversion, the creation of boundaries, and audio separation, contribute to the provision of the platform for elevation of the human. Therefore, if an architect decides to omit the Sahn, he or she should provide the same influence through other components of the building. It is to be hoped that the application of the pattern of the traditional architecture of courtyard in Iranian mosques leads to the improvement of the spatial quality and results in solutions for future innovative plans.

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