

Recognition of the Persian Garden Plan in Sheikh Ahmad-e Jam Complex

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Abstract | Gardens are an integral part of Iranian life and they significantly contribute to the structure and entity of Persian architecture. Since the Sumerians, the Persian garden was configured in a form that surrounded the palaces and fire temples. For Iranians, both water and tree were praiseworthy and the trees were arranged to be planted along wide water streams. Revering the water and the tree gives meaning to Persian garden. Not only is Persian garden a safe and peaceful place, but also it is a place for philosophical thinking and discussions. Persian garden is a sacred space, and therefore it is used to honor and revere a space. Tomb garden is a special type of Persian garden that is built in order to surround a tomb, or a monument in Persian style. There are different types of such gardens in Iran and many other countries that have Persian culture. Sheikh Ahmed-e Jam tomb is located in the city of Torbat-e Jam, in an 800-year old garden. Recognizing the trees and paths around this tomb indicates the existence of Persian garden plan in this place.

Keywords | Persian Garden, Garden Tomb, Sheikh Ahmad-e Jami, Torbat-e Jam.

Introduction | One of the greatest achievements and cultural wonders of Iran is the Persian garden, which is resulted from human interaction with the environment for arrangement of natural elements. The gardens provide an opportunity to protect trees and direct and manage water transference to the trees and plants optimally. The Persian garden is assumed to be an intermediate between the nature and the world by using regular geometric shapes. The garden reflects the mystical and religious concepts of nature and order of the world so that some consider it as a replica of paradise (Pourjafar & Vasiq, 2008). Persian Garden is a safe and peaceful place, and yet it is a place for thinking or contemplating in the blessings of God and even worshiping. The urge for immortality is experienced in Persian garden.

The Persian garden is a combination of independent and complete spaces. Apart from the main space, which is

formed on the basis of the main axis, there are separate spaces in other parts of the garden that are completely independent and are not a part of any other space ... The gardeners have paid attention to the to the spatial diversity so that no similar spaces can be found in the garden, except in cases where the design dictates (Mansouri, 2005).

The vast garden plan is one of the most well-known types of Persian garden plans ... vast gardens were typically built in a broad, rectangular, and suburban area, with a variety of functions such as residential, administrative, complex or tomb gardens (Shahcheraghi, 2010).

Among the various types of gardens, Kooshk (pavilion) garden arrangement has been one of the most common pattern for tomb gardens throughout history. The tomb of Cyrus is built on this basis (Ansari, 1999). In tomb gardens, all or a part of the garden is allocated to the tomb. It should be noted that description of paradise and its descriptive characters has been effective in emergence of this type of tomb gardens; thus, it can be seen as a

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reflection of people's desire to rest in paradise (Kazerouni, 2008).

The tomb gardens are also called the grave gardens, burial garden, and the garden of the tombs. An example of such garden is Piroozi garden in Ghaznein where Soltan Mahmoud Ghaznavi is buried in 421 AH (Shahcheraghi, 2010).

Sheikh Ahmad-e Jami tomb is one of the most significant historical monuments in Iran. The existence of numerous historic buildings with different function proves that this place was a tomb garden. Some of the spaces in Sheikh Ahmad-e Jam complex is a site that is extended in northwest – southeast axis. Recognition and studying of this complex can develop our knowledge of tomb gardens in Iran. This study investigates the spatial arrangement of Sheikh Ahmad-e Jam complex and tries to find out whether this complex can be considered as a Persian tomb garden.

Hypothesis

Based on the research question and review of space plans and planting arrangement of the old trees with their specific geometry and comparing it with the features of the Persian garden, it can be stated that Sheikh Ahmad-e Jam's complex in Torbat-e-Jam is a Persian tomb garden whose plan is organized based on the Persian garden geometry.

Persian Garden Geometry

The Persian garden is the result of arranging natural elements in an original form and with a prevailing manmade geometry. There are several reasons for the particular order of Persian garden geometry; the sanctity of garden space in the prototype of the Persian Garden can be one of the main reasons.

The geometric arrangement of the garden is dominated by geometric symmetry. This mathematical order and reasoning has long existed in Persian landscape architecture (Zahed Zahedani, 1998: 22). The contradiction between the organic growth of the trees, plants and flowers in the garden with the strict geometry of the garden reemphasizes the geometry of nature. These geometric principles and ratios depict the intentional domination of man on the nature of geometry in the garden (Laurie, 1986). This is a sign of human interest in layouts and its geometric symbolism. Organic geometry in plants and predominant Euclidean axes are a sign of the governing geometry of the great world, reflecting the essence of God and its justice in the world (Brooks, 1978).

The rectangular arrangement system, perpendicular paths and long axes with deep views are the features of holy spaces. "Mircea Eliade" addresses the sacred places and their origins with primary concepts such as order and systematic

arrangement and compares them to unholy place which lack order and regularity. Imposing a pattern with a sacred order on the environment is seen in some landscapes" (Masoudi, 2009: 53).

The particular geometric lines are considered to be a regular formation of nature, while these lines are particularly responsive to mystical and sacred structures (Shahcheraghi, 2010). In Persian garden, linear paths and lines are preferable, forming lines of water streams among the trees. The regular arrangement of cedar trees and other shading plants implies precision and strength in the garden" (Bammate, 1990).

Persian gardens created on a slopes also follow this specific geometry, since regular geometry and direct axes have ritual meanings. "The stepped garden in the north of Shiraz is located on seven consecutive terraces, and the Kooshk (pavilion) is located above. At the bottom, there is a large pool called the lake where running streams of water pour into. One of the most beautiful gardens of this type is the great garden in Ashraf" (Pope & Ackerman, 1997: 1434). The reason for the geometrical arrangement of the gardens is far beyond the climatic reasons, so that different gardens follow the same geometric patterns in different climates.

In Persian art, the geometry (rectangular geometry) is imposed on nature and the environmental structures. In order to achieve this goal and create a rectangular geometry, land effects, topography, and other barriers are simply eliminated in order to obtain the specific order in the garden. This is the result of the belief that a space should be perfectly arranged and organized to create a holy place.

Tomb garden in Persian culture

The religious beliefs of the Iranians and their great attention to the tombs have practically made the tombs a center for recreation and worship. Thus, there are various examples of green space arrangement in these monuments. Donald Wilber (1970:70) explains: "Shahrokh (Timur's son, 15th century) owned a plenty of gardens and he did not have any obligation to increase their numbers. Historians wrote that he paid specific attention to arrangement of a tomb near Herat. Its colorful and magnificent buildings are still observable on the slopes among an old pool and trees that are proudly standing in peace." Tomb garden is a kind of garden, allocated to a tomb in part or in whole. One of the oldest documents of the post-Islamic era indicates the Soltan Mahmoud Ghaznavi was buried in a garden called Piroozi in Ghaznein in 421 AH. Soltan Mahmoud was interested in this garden and ordered to be buried there (Encyclopedia of the World of Islam, 1993).

For the first time, a monument surrounded by garden was built for Cyrus during the Achaemenid period as the tomb of the king in Pasargadae. This tomb was located in an area filled with

flowers and trees that shaped the paths (Heidar Nattaj, 2010). After him, the Achaemenid kings built their tomb in an area called Naghsh-e Rostam, near the mountains. In the Sassanid period, fire temples and water sanctuaries were remarkable examples of landscaping and gardening.

The first group of Muslims who praised Prophet Mohammad (PBUH), strongly opposed any pretense of mourning, death and burial. The Hadiths show that the Prophet of Islam tried to prevent any signing for burial places specifically on his grave. Initially, his commands were respected; however, over time, seventy years later, the Prophet's tomb was identified and a magnificent mosque was built there by the order of Waleed I (Hadi & Gharaee, 2017).

The construction of great and magnificent tombs in Iran became popular since the end of the third century. Until the seventh century, the graves of Iranians were either monolithic or small. However, since the seventh century, they were comprised of a tomb, a guest house, a mosque, a monastery and other religious and service spaces (Sultanzadeh, 1999). The oldest tomb is Amir Ismail Samani's tomb in Samarkand. For the first time in the time of Alebuyah, building a structure on the grave was recommended. Before that, even the religious elders tried to make the place of their graves unknown (Pirnia, 2008). After the prevalence of Shi'ism, the Imam tombs became the center of interest for Shias. By evolving of the burial ceremonies, the tombs were also adorned with signs of reverence and eventually real buildings were built on their burial places. Soon, these tombs became the symbol of Shi'a political and religious interests and developed by the growth of public interest and financial resources, so that the tombs became the center of a vast pilgrimage complex that significantly played a major role in the political, social and economic life of the community (Hadi & Gharaee, 2017).

The design of the open space tomb in Iran became prevalent since the Safavid period. In order to respect the religious figures by the pilgrims, these places gradually became popular recreational centers in different days. The accumulation of population in these regions was an opportunity for designers to create masterpieces that manifest tranquility and peace in the outer environment of the sanctuary.

The tombs are significant parts of the Persian architecture. In the encyclopedia of historical Iranian monuments of Islamic period, the shrine and tomb buildings are divided into multiple tombstones, Imamzadehs, towers, monasteries, domes and tomb complexes (Bozorgnia, 2007: 80).

Common terms used for the tombs are Rowza, Gonbad, Mashhad, Marghad, Astaneh and Ghabr, or other special terms such as Ghadamgah or Imamzadeh. The meanings of these words imply that a tomb was also used for non-

burial purposes. Nevertheless, non-religious tombs became public centers as well. The most common way to deal with the Islamic beliefs that prohibited tomb building was to make it a part of a public complex. Therefore, the tombs could become sacred, and the surrounding buildings could serve as a means for the material and spiritual well-being of the Muslim community (Hosseini, 2009). Being a public place attracted to a wide group of people, these place had to offer recreational activities and services in different buildings surrounding the tomb. The well-known Persian garden could be an appropriate response for the people and government requirements. Shrines and tombs were important public spaces in the city, which attracted large population, depending on their importance and their equipment and institutions. In each city, there were local tombs where most people visited, especially during mourning and celebrations. Sometimes they spent hours or even days in the vicinity of tombs (Etemad, 2005). The function, the audience, and the time spent in these places determined the extent and the quality of service and other functions. However, in most cases, even in the most minimal tombs, the regular presence of water and plants reminded the holiness of Persian garden. Usually, the courtyards of the tomb gardens were decorated with ponds, flower gardens and cedar trees. There were also passage spaces between these elements, and some standing points in the borders or between the gardens. The courtyards were also a means for offering mental peace and spiritual readiness for entering the tomb. Shah-Cheragh Shrine in Shiraz, the tomb of Shah Nematollah Vali in Mahan and the tomb of Sheikh Safi in Ardebil are the most prominent examples of this tradition in the Islamic era in Iran. Tomb gardens can be considered as the first examples of public gardens.

Sheikh Ahmad-e Jam Complex

Sheikh Al-islam Abu Nasr Ahmad Ibn Abu Al-Hassan Ibn Ahmad Ibn Mohammad al-Nameqi Al-Jami, known as Zhendepil, is Ahmad Jam. He was a great Sufi born in 441 AH in Nameq village of Khorasan in a family of Arab descendants. His great ancestor, Jarir Ibn Abdollah Bejeli, was one of the Prophet's companion. The term "zhendepil" was the perfect illustration of his elaborate and powerful body, and his aggressive attitude. This term must be inevitably used during his lifetime by those who had known him. This term was first mentioned in two books by Hamdollah Mostofi and the poems of Shah Qasem Anwar (<http://olama-orafa1393.ir>).

The tomb of Sheikh Ahmad Jam (Figs. 1 & 2) dates back to 800 years ago in the city of Torbat-e Jam in Khorasan Razavi province. This building belongs to the 9-12th century AD. After Sheikh Al-Islam Ahmed deceased,

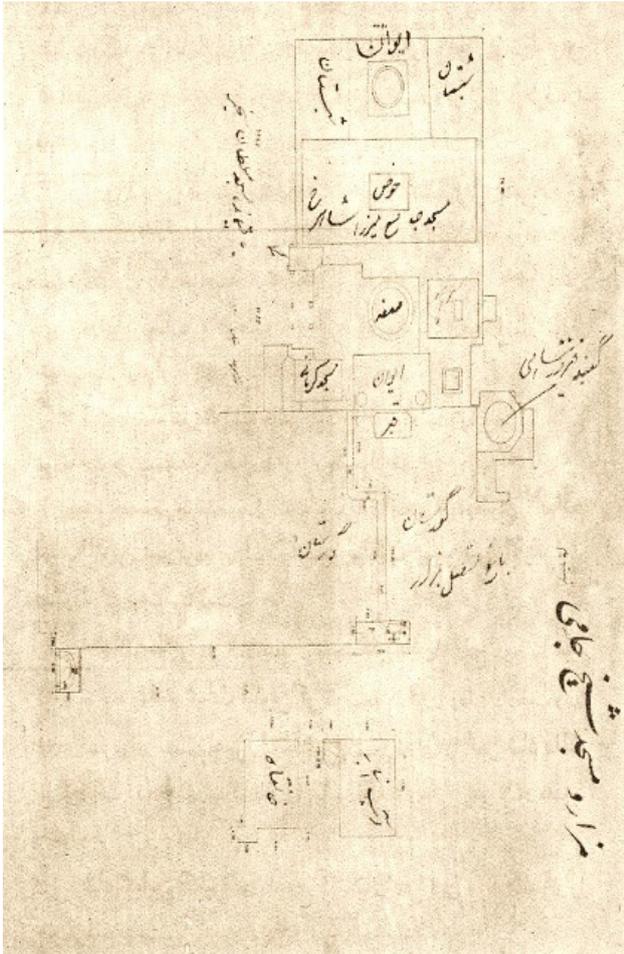


Fig. 1: Plans by Mack Cole. Source: Golombek, 1985.

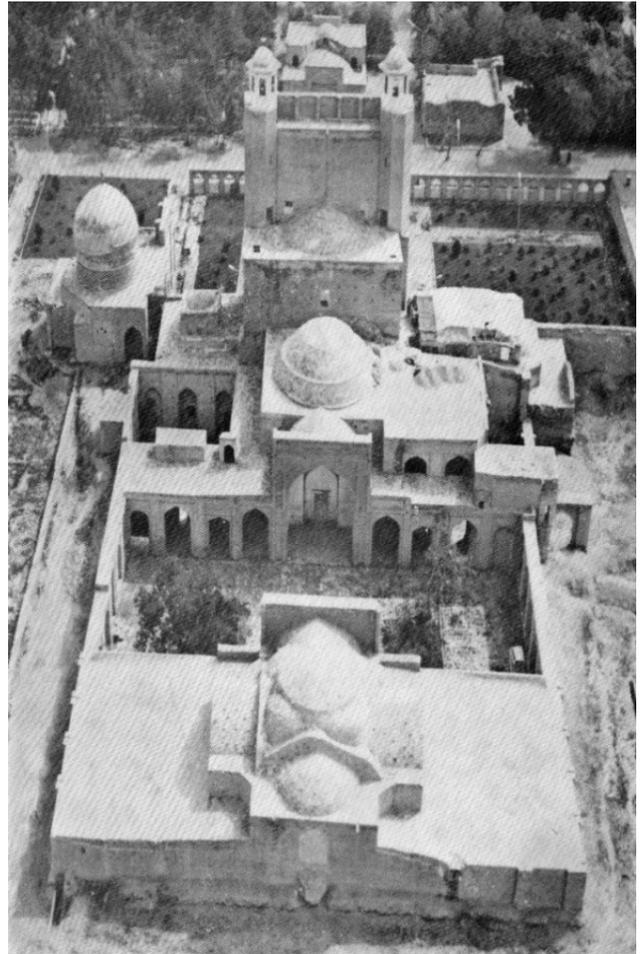


Fig. 2: A picture of the tomb's enclosure in 1965. Source: The collection of the technical council.

his companions, some of whom were rulers and political leaders, erected beautiful buildings around his cemetery for his dedication.

Tomb of Sheikh Ahmad-e Jam Monawar Hazrat Sheikh Al-Eslam Ahmad-e Jam is magnificently located near the high porch of the tomb in the open air. The tomb is ornamented with bricks and plaster in a particular way and elevated from ground level. The grave has two gravestones in form of an embankment; the first of which is a plaque with flower, leaves and plant decorations, and the latter is on the bottom of the grave adorned with side inscriptions and an old tree embracing the grave with its roots. Though the roots of the tree are demolishing the grave, Sheikh's descendants say that Ahmad-e Jami has mentioned not to destroy the tree. This kind of indigenous pistachio tree is native to Torbat-e Jam, and it is believed to grow on the tombs and graves of the Iranian Muslim liberators and elders. The pilgrims of Sheikh have a special belief in it. (<http://www.memarnet.com/fa/node/148>)

The spaces of the complex are: Dome House, Atiq Mosque, Porch, Kermani Mosque, White Dome,

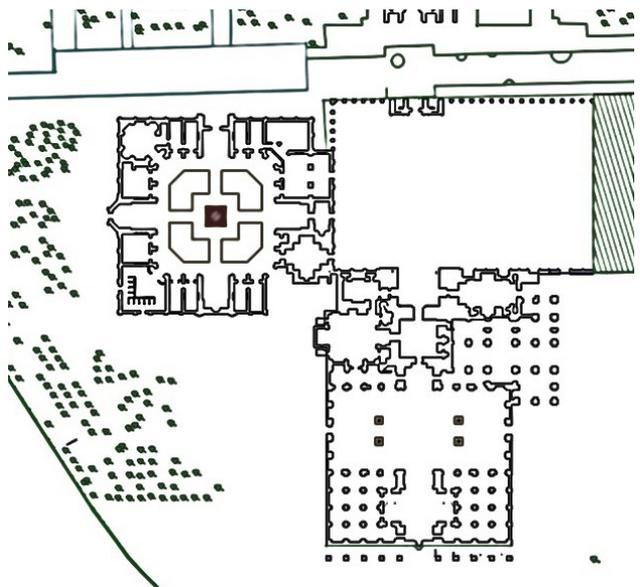


Fig. 3: Plan of the tomb and surrounding garden. Source: Cultural Heritage Technical Office of Khorasan Razavi Province.



Fig. 4: Plan of the tomb and surrounding garden. Source: Cultural Heritage Technical Office of Khorasan Razavi Province.



Fig. 5: Aerial photo of the complex. Source: Google Earth.



Fig. 6: The courtyard of the garden from outside. Photo: Zohreh Sanaati, 2016.

Saracheh, Firoozshahi Dome, New Mosque, Entrance, Water Supply and its Properties (Figs. 3-6).

Discussion and conclusion

Studying the plan and the spaces of Sheikh Ahmad-e Jam complex, along with field studies and observations reveals three main ideas: 1. The similarity of the plan and the space of the complex to the principles and characteristics of the Persian garden in terms of geometry and elements; 2. A common structure and hierarchy with similar spaces; 3. Sanctification of the place and special geometry of the holy spaces; all of which indicate the characteristics of tomb garden in this complex:

A. Geometry of the paths and plant arrangement: Regular and perpendicular axes with the presence of some old trees (or felled) on the margin (Fig. 7).

B. Water presence: Using an octagonal pond element in the front entrance of the building and the quadrangular pond in one of the courtyards garden (blue paths are not visible in existing condition) (Fig. 8).

C. General structure and garden typology: a combination of the exterior garden and the different courtyard garden, alike many gardens (Author) (Fig. 9).

D. Physical elements: the existence of structural elements of the gardens and tomb gardens and the complex enclosure (Author)(Fig. 10).

Comparison of the physical and geometric features of the complex with Persian gardens and tomb gardens is shown in Table 1.



Fig. 7: Regular paths with linear geometry and regular tree planting arrangement. Source: Authors.



Fig. 8: Water presence in the outer garden and courtyard garden. Source: Authors.



Fig. 9: Integration of the exterior garden and the gardens of the complex. Source: Authors.



Fig. 10: The physical elements of the complex including the walls and the building. Source: Authors.

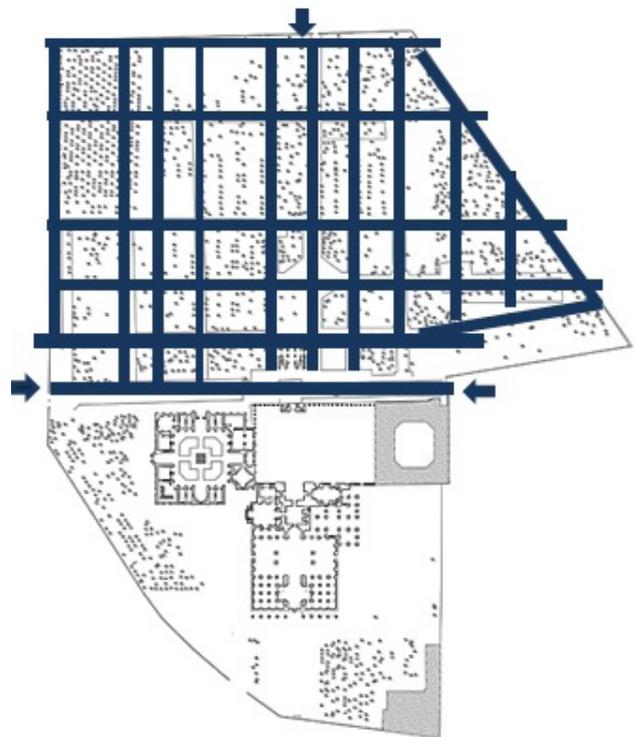


Fig. 11: Reconstruction of the plan of Sheikh Ahmed Jam Complex according to the position of the main axis and the existing entrances and the tangible planting arrangement order. Source: Authors.

The Tomb and Sheikh Ahmad-e Jam complex are one of the significant historical and religious monuments in Iran that include various buildings in form of central courtyards, alike Persian gardens that could be entered thorough an exterior garden. The accurate plan of the sacred complex and its comparison with Persian garden and major tomb gardens of Iran reveals that Sheikh Ahmad-e Jami complex in Torbat-e

Jam, is designed based on the Persian garden pattern with the emphasis and combination of garden and courtyard garden. It is a Persian tomb garden. The following plan is drawn up based on the predominant geometric pattern in the exterior garden of the complex and order of the old trees, which confirms the hypothesis of this study (Fig. 11).

Table 1: Comparison of the physical and geometric features of the complex with Persian gardens and tomb gardens. Source: Authors.

	Sheikh Ahmad-e Jam Complex	Persian Garden	Tomb Garden
1	Planting Geometry Regular and linear geometry (symmetry and visual geometry)	Regular and linear geometry	Frequently regular and linear geometry
2	The Presence of Water Existence of a pool pond in the vast exterior garden and courtyard garden	Different types of water effect	Dominance of pool (stagnant water) on running water
3	Typology Combination of exterior garden and courtyard garden	Different physical types	Combination of exterior garden and courtyard garden
4	Physical Elements The wall and different buildings	The wall, existence of main building and service buildings	The wall and different buildings

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