CHAPTER 7

Conclusion

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7.1 (a) Comparison of the Iranian and Indian gardens

As mentioned in previous chapters, Iran and India have had close ties and friendly relations throughout their history that is rooted as common culture of these two ancient civilizations. During the vicissitudes of history of the two countries, there are hundreds of documents that represent the relationship among the people of the two territories with each other. Greek historians Herodotus and Xenophon in their books have reported of friendly relations between Iran and India in the first millennium B.C and we witness the Indian delegation bringing gifts at the court of the Achaemenid king in Persepolis the capital of the Achaemenids in the fifth century B.C. This period coincides exactly with the emergence of the first Chahar-bagh in Iran and in Achaemenid inscriptions and historical documentaries remainder of this period, mentioned that India (parts of North and West India, including the Indus River plain) was considered to be one of the provinces of the Achaemenid Empire. In continuation, this relationship continued during the Seleucid dynasty in Iran and Maori dynasty in India, and during the Gupta period we witness the rise of cultural and friendly relations between Iran and India. This relationship is to the extent that, when the Kushan dynasty forms in North East India at this time, which were using Pahlavi script and language that was the official language of the Sassanian dynasty in Iran. At the same time we witness the painting of Khosrow figures, the king of Iran on one of the walls in the Ajanta Caves. These relationships have continued in later periods and peak of this cultural relationship in the history of the two countries is expressed in the Mogul period in India, who are all descendants of Timur, the king of Persia. At this time, in addition to the spread of Iranian culture, the Iranian script was also proposed as the official script in India and continued until the arrival of the English colonists to India.
During the reign of the Moguls in India, Humayun took refuge in the court of the King of Iran and lived in Iran for few years. During his stay in Iran, he learnt about Iranian architecture and gardens and later applies it in India. In addition to this, during this period we witnessed the presence of Iranian architects in India who created valuable monuments such as the Taj Mahal.

With studies in the field of roots of the Mogul gardens, first we looked at it from the historical approaches and discussed its historical features, Iranian gardens period and its architectural evolution in India. Then we reviewed its architectural approaches and studied the formation, typology, function and spatial structure of the Iranian gardens and its effect on the Mogul gardens.

In general, it could be said that the gardens in Iran during the Safavid and during the Mogul period in India, follow the same pattern in the context of general principles, artificial and natural elements, and differ only in the details with respect to each other. Of course, these details have significant features in their aesthetic terms.

During this period we witness the construction of dozens of gardens across India that are built in the style of Iranian gardens and have implemented concepts such as Chahar-bagh and Hast Behesht (eight paradises). It should be noted that in the Iranian style garden; most of the gardens are built on sloping land. this matter can be clearly seen in Chehelsotoon garden in Behshahr; Shiraz Eram garden, Fin Garden in Kashan, Shazdeh Garden and Tajabad Garden in Natanz. On the other side, we witness the same features in garden style of the Mogul empires in India and almost all gardens built by Babur are with the standard of the Persian garden. Gardens remnants of the Great Moguls in Kashmir region were all built on the slope land.
The most important features of the Persian garden is induction of Chahar-bagh tradition, where the garden is divided into four squares which in most cases, these squares are divided into four parts again with the placement of a building in there. Usually the building has eight-part plan and form and is known as Hasht Behesh (eight jeaven) which reminiscent the concept of eight in heaven. I think, Persian gardens and Islamic gardens continue to inspire subsequent gardens with their design and purpose although many later gardens may not have any religious or urban function. But Brend believes that Persian gardens display a metaphor of paradise: “It is not surprising that the design of Islamic gardens and garden courts is governed by the square grid of water channels which derives from the practical needs of irrigation. Nor is it strange that every vision of Paradise which Islam offers to the believer is that of a garden with running waters, and that every garden in the Islamic world tends to be seen as a metaphor for Paradise.”

The tradition of Persian gardens is implemented exactly in the Indian garden and it could be said that the physical structure of India's Mogul gardens just like the Persian Gardens have geometrical order in the main and sub-sectors of it. In fact Chahar-bagh is used in most gardens of Mogul India as a model of the garden during this period.

"Some versions of the world's geography, describes four parts of the world that has a mountain in the centre, this aspect has been repeated in the Persian garden designs as well as in many Mogul gardens of India. This small hill was adorned with pavilion and had an advantage of overlooking the surrounding landscape and gardens."

In both gardens of Iran and Mogul India, there is a pool, pond or stream in the centre of the garden that four branches stem from it in the form of four channels in a straight line and divides the garden into four parts. In addition to these streams in both gardens style, there are walkways with a level higher than the streams and water channels.
Another issue that must be pointed out is confining walls around the Iranian gardens which in fact creates the sense of a special place in the garden and separates the bustling outside world from the disciplined inside world and also due to introverted architectural style, has been commonly used in these gardens that this component also is identically repeated in Indian gardens and we witness the use of confining walls in most of the famous gardens in India such as the Taj Mahal, Humayun's Tomb etc.

Iranian and Indian gardens almost follow the same pattern of use, so that there is a building in the centre of the garden in both style gardens. However in India, the central monument is a tomb in most cases, whereas in Iran this is not the case.

Generally, the gardens built in Iran, from Safavid to Qajar period are as follows:

1. Residential garden with house built in it, in accordance with the builder position that used to be for nobility and gentlefolk. These gardens themselves are divided into two categories of large and small residences.

2. Belvedere garden, palace garden or gardens that were built around a palace or administrative centre. During this period in many cities, the government control and administrative centres are located at the centre of a garden.

3. Tomb Garden that was built around the tomb of a famous and important person. This type of garden is used lesser than the previous types in Iran including tomb of Mullah Hassan Kashi in Soltaniyeh and Mazar Gazme Garden.

4. Administrative or governmental garden that is considered to be one of the most complete variety of Iranian garden and in addition to the King’s accommodation also had Court House, the royal palace and the residence of the country and the military figures. In this model we witness, the use of all components of Iranian garden including four galleries, square plan etc.
A very important issue that needs to be noticed is that the Garden has a very old tradition and history in India and today we know about the importance of trees and gardens in the culture and civilization of Harappa and also know that the garden is mentioned in ancient Indian books like the Ramayana and Mahabharata. In this part we discuss about Persian garden style and its impact in the Indian garden during the Mogul Empire period, while there are also other styles of gardens in India. Overall, the gardens of India in the Indian subcontinent, includes parts of present-day Pakistan and parts of Afghanistan and Bangladesh and are as the following:

1. Temple Gardens
2. Home Gardens
3. Paradise Gardens or Persian Gardens
4. Botanical and Zoological Gardens

In the previous chapters we pointed out that the Iranian gardens were commonly used in the Mogul period in India and what we call as Indian garden in this discussion is the same style as the Persian garden in the Mogul era. During the Mogul period, gardens of India fall into three general categories:

1. Tomb gardens that most of Indian gardens in Mogul era are classified in this group. There gardens were built around the tomb of famous people such as King (Humayun's Tomb - the tomb of Babur) or Queen (Taj Mahal).
2. gardens that are built for recreation and leisure purpose such Nasim Bagh, Shalimar Bagh, Nishat Bagh and ...
3. Governmental or administrative gardens that was quite similarly used as the Iranian governmental gardens. Among the best examples of this type of garden in India
Anguri Bagh, Agra fort Garden, Ambar fort garden and Lake Palace (Jag Niwas) can be noted.

Apart from the Taj Mahal which is located at the end of the garden, most of the Tomb Gardens of India are shaped on the basis of individual building designs with massive scale in the middle of a large garden with an iconic view and due to reduction of height and importance of the walls and trees, the building is visible from a great distance. Tombs of Humayun and Akbar Shah are the examples of this type of Iranian Garden in India.

Keep in mind that fruit orchards which have agricultural and economic uses and have different nature with Gardens discussed in this study are not included in this classification.

It should be noted that Garden is a symbol of paradise. In the Persian style garden, water is flowing in the garden in such a way to create a resonating sound in the Garden. This point can be seen in the gardens of Safavid and Qajar in Iran, that designers and architects make grooved bumps in the furrow in order to create waves and the sound of water in the garden, which creates waves at water surface and increases sound of the flowing water. During this study, the mentioned point was not seen at any of the gardens in India and the author did not find traces of it even in historical texts and it possible reason could be sue to high volume of water in India. In Iran, the lack of water causes the different techniques to be used to show greater volume of water in a large Garden. Since in India the water shortage is not as severe as in Iran, this technique has not been used. However, this has no relation to the Original concept in both traditions of the garden and we witness the presence of pool, waterfall or fountain in front of the mansion that in addition to cooling the air, creates a beautiful landscape and supplies the required water for the garden.

Iranian architects in the design and construction of the Persian Garden had some tips in mind which can be referred to as key factors of garden construction in Iran. Some
characteristics, such as location of the building, segmentation of garden space by water channels and building a garden on a sloped surface, has been discussed, but the important point that must be noted is the tradition of straight lines in architecture and segmentation of spaces in Persian garden which is clearly visible in all Persian gardens and then the same rule is adhered in architecture and spatial planning of Indian gardens and all garden spaces are subjected to straight lines which in the end gives a geometric perspective to the viewer. This point can be clearly seen in the review of garden plans of Safavid in Iran and Mogul India.

Another key feature of the tradition of Persian gardens which is repeated in India is the use of large trees and narrow trails. A part of the garden is dedicating for fruit trees in both garden construction traditions.

According to historical documents, Shah Abbas Safavid built a garden and a palace outside the city of Isfahan each area was for specific trees. The garden was divided by geometrical and geometry pattern and a specific fruit such as peaches or figs etc. had been planted in every part of it. Almost the same point was seen in many gardens in India and based on historical documents; many Indian gardens had fruit trees until the rise of British colonialism. Taj Mahal and Nishat Bagh are two important examples of this type of garden.

However, the climatic differences between the two countries should also be considered. India comparatively has humid climate and rainfall and water resources in the country are far more than Iran. Although the tradition of Persian garden was used by Persian and Indian architects in India, the rich culture with the support of its old history could give an Indian flavour to it and even though, the Indian gardens have adopted the Persian Garden pattern and concepts of Chahar-bagh and Hasht Behesht, but it never was a blind imitation and we can visibly see the rich Indian culture and art streaks in the Indian garden style. (Table 6)
Garden and farming in Iran especially in the central plateau region where climate is drier; was somehow representing paradise and the word Paradise in English is rooted from the ancient name of Pardis in Persian meaning heaven and this point is also noticeable in the Hindi language, where Indian people use the fully Persian word of Bagh to refer to the word Garden. In the Persian garden culture; the structure of garden reflects the close relationship between people, culture and nature. In fact, the concept of the Persian garden was the effort of architects of this land to align the human soul with nature and the promised paradise and the same concept was considered by Indian garden creators and use of pattern of the Iranian garden based on Chahar-bagh is used in multiple tomb monuments in India of which the Taj Mahal and Humayun's Tomb, are among the most important examples and somehow indicates the placement of deceased person in heaven. Keeping in mind that the Mogul rulers in India were believers Islam and this belief presupposes belief in the concepts of heaven and hell which is well reflected in the idea of a Persian garden. That's why the Mogul kings decided to build their tombs in such space as reminiscent of heaven. However, the structure of the garden in Iran and India does not only serve abstract ideas and the deceased person, but material and human senses are also considered in both style gardens. Actually, the Iranian garden tried to pay attention to all five senses in both countries of Iran and India.

- Visual sense: enjoying the scenery and the beautiful landscape of garden in such a way that the building is located in the centre and in the best part of the garden and the viewer witnesses the beautiful and wonderful, yet order-based landscape.
- Hearing: natural garden sound, collision of tree branches with each other and the sound of birds in the garden, alone was not enough to satisfy the garden architects and therefore we are witnessing the construction of waterways, waterfalls and creation of humps in the stream beds to create the sound of water flow in the garden.
• The sense of touch: being in cool shadows of the garden and feel and sensing the breeze especially on hot summer days is a unique experience to visitors.

• Sense of smell: the fragrance of flowers and plants in the garden alone is enough to satisfy any person's sense of smell.

• The sense of taste: As mentioned earlier part of the Persian gardens in India and Iran have been devoted to planting fruits, and by eating the fruit of these trees visitor's taste buds are satisfied.

Thus it is understood that, generally, Persian gardens pay special attention to the concept of life and existence and also takes palpable and abstract concepts into account.

Persian Gardens play an important role in the tradition of Urban Development and the formation of ancient cities of Iran. These urban green spaces were an important part of the pattern of urban development and in addition to creating beautiful visual effects, and mainly based on their uses, have had a major role in Iranian historic cities, which, later after the Mogul dynasty in India, the above-mentioned trend continues in this country.

As mentioned, gardens had different uses, of which governing centre gardens, tomb gardens can be pointed, that each of which had a special place in ancient cities. Naturally garden and its plants are dependent on water resources and this water needs to be even greater in the tradition of Iranian gardens which is based on the existence of the central pool and waterways. For this reason, water for pools and garden irrigation must have been supplied from near water sources. In some cases, the garden was built by the river or lake and in desert areas the aqueduct was used to supply water.

In Safavid Iran; Architects took full advantage of the Zayandeh Rood River in the city of Isfahan, the Safavid capital and we witness the emergence of dozens of large and small gardens in the city. In water scarce regions and cities that lack the river, this issue had been
solved by uses of unique aqueduct and water canal technology. We are witnessing a repeat of the same point during the Mogul era in India, which part of it coincided with the Safavid period, and construction of a large number of Iranian-style gardens on the Yamuna Riverbank in Agra is the best example of it.

It should be noted that, Persian gardens in India are considered as one of the garden styles of the culture and it should not be generalized to other garden styles. As mentioned earlier, there are different types of gardens in India that each has a separate origin and different process of evolution. For example, unlike the Persian gardens in the Mogul era, gardens around temples are built with the aim of meditation and prayer rooted in Buddhism. Although the cultural relationship between Iran and India has always existed in the form of a continuous flow during the long history of the two countries, the tradition of Persian Garden and its influence on Indian style gardens occurred in the Mogul era. In terms of expertise and by study of methodology used in Indian garden of the Mogul period, it can be claimed that, Iranian style gardens in India, is a fusion of architecture and common garden style of Timurid and Safavid era in Iran. Based on historical documents and archaeological evidence, we know that in the Timurid era in Iran, special attention has been paid to the landscape and garden scenery. It should be noted that, India Moguls were descendants of Babur, who is Timur's grandson, the king of Persia and founder of the Timurid dynasty, and according to specific political and cultural conditions of the time, these kings had a close relationship with Safavid kings, that this issue led to migration of a large number of Iranian poets, artists, politicians and architects to India in this period and so we witness the blend of Timurid and Safavid style gardens in India that forms the foundation of Persian Gardens in India.

Iranian-style gardens in India began during the reign of Babur, the founder of the Mogul dynasty in India. Most of the gardens built by Babur are Terraced Garden or Summer Garden or Pavilion Garden. Kilan Garden near Babol, Wafaa Garden that was built in 1508
A.D in Kabul, Aram garden which was built in 1528 A.D and Zahra garden in Agra are all from this group.

later Mogul kings with mimic the style of Chahar-bagh and the use of streams and water flowing canals in the garden, tried to build a mausoleum for themselves, that evokes the Garden of Eden based on Islamic sacred texts in which various streams flow in different levels.

Official tradition of Mogul gardens in India, is same as Iranian Chahar-bagh and majority of gardens built in this era in Indian Territory have square or rectangular plan which is symmetrically divided into four parts and have walkway and separate sectors. Symmetry is one of the principles of Traditional Iranian Architecture that has entered from Iranian garden to Indian Mogul gardens. Based on the tradition of the Persian Chahar-bagh, we witness the presence of mansion or central building, pool and connected streams in these garden.

The best example for these gardens that is built in the aftermath of the Babur and by other Indian kings is Taj Mahal itself. In this era we witness the construction of many gardens by the descendants of Babur that many of them were built during Akbar Shah. The best examples in this field include: Anguri Bagh in Agra, Amber Garden in Jaipur and Lake Palace (Jag Niwas) in Udaipur.

This continued movement of gardens by the Mogul Kings led to construction of dozens of Iranian style gardens on the Yamuna riverbank which shows the evolution of the style of Iranian gardens in India.

Hasht Behesht got stronger presence in Iranian gardens during the sixteenth and seventeenth centuries which gradually become the favourite style of the Mogul kings. Hasht Behesht was used for both tomb gardens and residential garden and a square or rectangular plan building is built in this style and corners are done in such a way that the building
appears to be octagonal to the viewer's eyes that in itself represents the concept of eight in heaven, which in turn is rooted in Iranian architecture in the thirteenth century A.D, and Soltanieh Dome is constructed in similar concept and we witness the concept of eight in Paradise in it, that is built three centuries before the Mogul gardens in India.

Another major forms of Persian gardens built in India is in the form of a square plan which is enclosed by walls and have towers in the corners and there are several routes and paths within the garden. There are usually four gates in battlements and walls of the garden, which is connected to the central building by walkways with cypress trees planted on both sides. This square garden was divided into four separate parts by two main paths that intersect in the shape of a cross.

Majority of gardens built in Shah Jahan's era are mainly residential and were built along a river. It should be noted that, the Taj Mahal as the most well-known tomb garden in Indian architecture, was built in this period.

Shah Jahan period can be considered as the peak of garden construction and Mogul architecture after which gradually the importance of gardens were diminished. In fact, by study of the evolution of the Persian garden in India, it is understood that, using the concept of a Persian garden started in the era of Babur and culminated in the era of Shah Jahan the garden was considered as an important part of urban and regional development at this period, but this tradition lost its importance and faded at the end of the Mogul dynasty.

Considering the discussed cases and issues, today in the study of Iranian garden, the contribution of the Indian garden during the Mogul era cannot be ignored. In fact, Persian gardens in India and Iran are the two adjacent branches of a tree that, although they are from the same family, each has its own style and detail and is common in its general concepts and principles. Persian garden style in India cannot be considered as a blind imitation of the
gardens of Safavid Iran, but rather Indian artists and Iranian immigrant architects used Indian arts and culture arrays in the construction of Mogul gardens and this is particularly visible in architecture and decoration of the central building in the garden.

Despite the specific climatic condition of Indian Territory and its differences with Iran, still many similarities could be found between the basic elements of the Persian garden and the Mogul garden. If we consider: water, trees, landscape, economic benefits, architectural geometric arrangement, irrigation, harmony of garden type with the climate condition, as the main elements of Persian garden, then many common points could be found between the two garden styles. Generally, the common feature of Persian Garden style in Iran and India can be divided as follows:

1. **Persian garden style in terms of planning and geographical location**

2. **Geometric principles of garden**

3. **Access to water resources**

7.1 (b) **Persian garden style in terms of planning and geographical location:**

Persian Garden in terms of structural planning and location is divided into five groups:

1. The Persian garden built on flat land with smooth slopes: In this group of gardens, the architect uses the natural slope of the land for the flow of water and as a result, the garden plan will be regular and in geometric shapes. The best example of this garden in Iran includes: the Fin Garden, Chehel Sotoun Garden in Behshahr, Tajabad garden in Natanz, Eram garden in Shiraz, and the best example of this type of Persian gardens in India are: the Taj Mahal, Humayun's Tomb, the tomb of Safdarjung.

2. The Persian garden built on hills and steep slopes: In this style of Iranian gardens, architects and garden designers tring to take maximum advantage of slopes and
usually the main building is built at the top of the hill or on the downhill and so a beautiful landscape would be created in front of the building. In this style of the garden, the sloping ground is used for green spaces. The best example of this garden in Iran is the Shazdeh Mahan garden and the best example of this type of Persian gardens in India includes: Nishat garden and Shalimar garden of Kashmir.

3. Garden in the middle of a large pond: In this style of Iranian gardens, the Mansion is placed on the surface of the natural or artificial pond or lake, and the garden is designed around the pond. In this way a combination of pleasant views of the lake, pavilion and trees of the garden is created. The best example of this type of Gardens in Iran is Behshahr’s Abbas Abad garden. Its Indian examples are Farah Bagh in Ahmednagar and Jal Mahal palace gardens built in the eighteenth century.

4. Outdoor gardens outside the house: In this style of Iranian gardens, a semi-externalized and semi-enclosed space is created and the most important uses of this type of garden is to accommodate important and famous people.

5. Riverside gardens: In this style of Iranian gardens, the garden is built on the side-lines of the river and in addition to changing the view of the river; creates a fantastic view combining the beauty of the river and the trees in front for observers and residents of the central building. In this style of Iranian gardens, there is no problem to supply water to the garden, and a perennial source of water is always available. The best example of this type of gardens In Iran are gardens around Zayanderud and in India are gardens built on the Yamuna River side, in Agra.

It is also very important to know that in most cases, Persian Gardens are situated in the north-south axis and very rarely in the west-east axis.
7.1 (c) Geometric principles of garden:

In general, the Iranian garden has a square or rectangular plan which is enclosed with walls. This wall completely separates the outdoor from the inner part of the garden and forms a border of the garden. Symmetry is very important in the design of the Persian garden and can be seen in division parts of the garden, paths and water channels and even in some cases in the architecture of the central building. Central mansion is always located on the symmetry line of the garden and the peak of this symmetry can be seen in aerial photographs of garden. The interesting point about this meticulous symmetry in Iranian garden design is that the principle of symmetry has been used even in the choice and planting of trees and flowers, and the plants planted on either side of the main axis and the minor axis of the garden, such as streams and water channels also have symmetry with each other. This theme, along with the use of straight and vertical lines and 90-degree angles led to the creation of Chahar-bagh in the Persian Gardens, that its four divisions have been formed based on the axle geometry and symmetry. In fact, the Persian garden can be considered as a special harmony of geometry, architecture, water and plants. In most cases, square is the popular and useful figure of architects in the design of Iranian gardens. This principle is also well seen in the example of the Mogul gardens.

7.1 (d) Access to water resources:

A garden itself is dependent on water resources and in both Iran and India; the architects have tried to build their gardens close to water resources in order to make access to these resources as easy as possible. Water resources of these gardens vary according to climatic conditions of each location and can include rivers, springs, aqueducts and wells. In the Iranian garden, water is not used only for irrigation and has presentational and dramatic aspects to a large extent. That's why there are pools, ponds, waterfalls, fountains and
waterfronts in Iranian gardens. On the other side water must be run from the central pool into
designed streams and small channels. This action aims to create beauty, cooling environment,
create the sound of running water in the environment as well as irrigation of trees. It is also
used in the Mogul gardens, and large pools with galleries on it, broad and stretched
waterfront in the longitudinal direction of gardens are all used to display the water as well as
playing with the water by flowing it around Mansions or throughout the garden.

The Mogul Gardens in India with regard to climatic differences with Iran, has certain
distinctions with Iranian gardens especially gardens, of the Safavid period, which are as
follows:

- The role of trees to create shade in the Mogul gardens of India is much lesser than
  Iranian gardens that are why most commonly; decorative shrubs are used instead
  of trees.
- Retaining moisture in Indian environment is not essential which avoids the use of
tall and shady trees, and is resulted in reducing the escalation of perspective in
line with the long axis of the garden and mostly decorative flowers, shrubs or
medicinal herbs have been planted. Of course because of similar climates of
Kashmir (mountainous) with Iran, its gardens are excluded from this category.
- Most of the Iranian gardens are palace gardens whereas Mogul Indian gardens are
  mostly tomb gardens.
- The concept and function of gardens in Iran is mostly a place to enjoy life and to
  create paradise on earth, but it was gradually changed it when reached India, and
  became a place for allegory of heaven for the tomb of the great Mogul kings.
7.2 Notes and Reference