Bahlgerd Garden, a Prototype and a Pattern for Gardens of Birjand

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Abstract | The Persian garden is known worldwide for its humanistic aesthetic approach toward nature. Having a unique geometry, character and elements, the Persian garden has been categorized by miscellaneous scholars according to the context, shapes, elements and their functions, and activities that took place in the gardens. The residential gardens, as one of these categorizations, refer to the permanent settlement activities in the garden. Since most of the gardens belonged to the governors and were used seasonally for recreational or governmental purposes, a few examples of permanent residence in Persian gardens can be sought in Iran. Gardens of Birjand are typically considered as distinctive gardens due to their unique features, such as the absence water or a pavilion on one side of the garden. Despite having the basic characteristics of the Persian garden, including geometry, axis, and etc., Bahlgerd Garden has elements and spaces that are organized to provide housing and supporting services. The presence of a distinctive pavilion as the inner (private) garden, the absence of a pond and an pavilion in the central courtyard, lack of a deep view to the garden from the pavilion, vast yards for cultivating productive plants and the presence of a water pond in the garden as a source of irrigation all indicate that Bahlgerd Garden was dominantly used as a residential garden. It can be said that the sacred aspects of Persian garden have not yet been revealed in this garden, and the designer aimed at creating favorable Persian spaces along the agricultural fields by creating private spaces and etc.

Keywords | Persian Garden, residential function, private garden, Bahlgerd Garden, gardens of Birjand.

Introduction | Persian garden is one of the most renowned gardens worldwide with brilliant records throughout history that have inspired numerous civilizations in arrangement of their green spaces. The deep interest of Iranians in creation of large gardens inside or outside of the cities or in the houses is firstly attributed to the warm and dry environment of Iran. This interest is seen throughout the written history of the Persian territory. Many Persian gardens were private ones owned by government officials; however, the ideas of these gardens rooted in the culture and beliefs of nations profoundly. Moreover, Persian gardens had various functions and were created according to different purposes.

The pattern of a vast garden plan is one of the most well-known types of gardens in Iran. Vast gardens were usually built in a vast, rectangular area out of towns, and were used for various functions including residential, governmental, or gardening functions (Shahcheraghi, 2010). One of the main features of the Persian garden, which distinguishes it from other types of gardens, is its rectangular geometry, and its straight lines and quadruple divisions. This feature is the distinctive character of Persian garden which has long been considered by many people.
The Residential Gardens
Many government members and governors built their property in a garden for the favorable conditions. Such gardens were often located around or outside of urban fabric (Soltanzadeh, 1999: 44).

In different types of residential gardens, one or more mansions were considered for the residents, often called “Andaroni” or the inner garden. These private spaces were designed and constructed in a socially and structurally well-defined manner, so that privacy was offered. In order to provide discretion and make the inner garden distinguishable and preserved from the other parts of the garden, they were built on one side of the garden. In this case one or several open, enclosed or semi-enclosed open-air spaces were added to these private spaces (Ibid: 60).

The main axis is the main path in the garden which links the entrance to the main pavilion. In all gardens, there is an open space in front of the building called “Miankart”, which in fact connects the main axis to the pavilion. An important principle observed in Miankart is the open viewpoint in a form of an extended rectangular shape. No tall trees were planted in this space in order not to block the open view. There were four viewpoints around the square plan where the pavilion was located, and the paths led to the four sides of the pavilion (Pirnia, 1994: 5). The presence of these rectangular viewpoints to the pavilion and the planting of tall trees on both sides of the main axis plays a major role in creating a perspective that makes the garden look longer and extends the garden paths psychologically.

In general, the network of garden paths is based on factors such as the overall shape of the garden, size, location, and the number of buildings and patios located in the garden. In most gardens with a rectangular shape, there are two north-south and eastern-western main axes, and several narrower paths perpendicular to the main axis. These pathways create a network that connects various building units of the garden to the main axis and building. The design of gardens has always been completed by the creation of palaces, pavilions, porches and so on and the pathways, the pools and fountains were located according to the location of the main building and other building units. Attempts have been made to locate the garden building where the best view to the garden is offered. The octagonal design of many pavilions can be influenced by the surrounding area that allows the viewers to see different views of the garden. In some gardens, despite the existence of a magnificent palace as the heart of the garden, smaller pavilions were also created (Encyclopaedia of the World of Islam, 1996: 590). The pavilion is often an extrovert building with identical physical characteristics in all sides. In most cases, the façade which benefited from the best orientation, climatic condition, view, landscape and location was considered as the main façade and was often designed with a porch in front. The elevation of the porch and pavilion was higher than the earth surface more or less in all gardens (Soltanzadeh, 1999: 58).

Hypothesis
It seems that the residential and governmental aspects of a garden was prevalent in Bahlgerd Garden of Birjand. This garden has been able to fully respond to residential functions through preserving the indigenous geometry and the basic characteristics of the Persian gardens, and it has been considered as an effective prototype in configuration of the gardens of Birjand.

Reasons for Locating and Creating the Gardens of Birjand
Geographically, the city of Birjand is located in a situation confined from southern and northern sides by two mountains, and it joins a flat plain on the eastern and western sides. The mountains located in the southern part of this city, known as Bagheran’ Mountains, are famous for being a source of life and vitality for the adjacent villages and towns. Bagheran Mountains has many valleys which lead the rainwater to the plains on the northern side of the mountain. Almost all villages and gardens are located alongside these rivers and their watershed. Nevertheless, extracting the underground water through using Qanats has also been common in Birjand. These Qanats are recognizable in many of these villages and gardens for providing water consistently.

Historical Gardens of Birjand
Major historical gardens of Birjand were created during Qajar period, the time of Mohammad Ebrahim Khan Shoukat al-Molk (1880-1944), son of Amir Alam Khan Heshmat al-Molk who was the ruler of Birjand and the surrounding areas during the period of Nasir al-Din Shah. From the eight historic gardens of Birjand, only two gardens of Akbarieh and Rahimabad are located in the city of Birjand; however, they were considered to be located on the outskirts of the city prior to the expansion of the city (Ranjbar, Mehrabani Golzar & Fatemi, 2006: 53). Therefore, the gardens of Birjand can be considered as vast gardens that were created on low sloped outskirts of the city.

All of the historic gardens of Birjand are built outside the boundaries of the old city of Birjand due to absence of Qanats in the old city and their abundancy in surrounding villages. Being used as a summer promenade, some of these gardens were located in villages such as Noferest and Bahlgerd that were located on the slopes of Bagheran Mountains. Therefore, adjacency to villages can be considered as the characteristics of the gardens of Birjand.
Another prominent point in creation of the gardens of Birjand is their north-south elongation owing to the orientation and wind direction. An image of a garden in Iran is simply a pavilion at the intersection of perpendicular axes. However, gardens of Birjand display a unique type of gardening and locating a building in the garden that is specific to Khorasan region. Building a spacious mansion in eastern-western direction and located on the southern side of the gardens clarifies that this mansion was a permanent residential place. It should be borne in mind that most of the pavilions in Persian gardens have leisure, seasonal, and recreational purposes, and are therefore very smaller than the gardens of Birjand. The eastern-western orientation of the building is also due to the maximum use of the prevailing wind in Birjand and disallowing the eastern-western disturbing winds.

A historical study on gardens of Birjand shows that the mansions built during late Qajar and early Pahlavi periods in this city were mostly pavilion buildings (Behnia, 2001: 65). However, the former mansions were built as a set of habitat on one side of the garden. Despite the necessity of water in these gardens, it is amazing that water is basically not used in some of these gardens. This is true in certain cases and building a garden without water is only seen in Khorasan province and northeastern Iran (Wilber, 1969: 36).

Using water as the main element in shaping the geometry of Persian garden is unique in Birjand. Like all other desert cities, such as Kerman, Yazd and Kashan, the city of Birjand has a fairly dry weather. However, unlike the gardens desert cities used in which the water is used to display and organize the space, the use of water in gardens of Birjand is limited to displaying or recreational purposes in certain private spaces and Andarouni spaces in a very small scale.

On the other hand, the major display of water in the gardens of Birjand is limited to the water pond in front of the main building in line with the main axis of the garden. Unlike other Persian gardens, water does not flow in the main axis in gardens of Birjand. The length of the old pines and cedars in a long and continuous path is another characteristic of the gardens of Birjand in comparison to other Persian gardens. Elongation of the axis and emphasis on infinity in these gardens are much stronger than other Persian gardens. An example of this long axis along the garden can be seen in Shazdeh Garden of Mahan.

Bahlgerd Garden

"Bahlgerd Garden and mansion complex is located 20 kilometers east of Birjand on the southern side of Zahedan Road and has been used by Shoukat al-Molk and Alam family" (Archive of South Khorasan Cultural Heritage Organization). The garden is a complete complex that consists of a mansion, Andarouni (inner) and Birouni (outer) garden, a place of residence of the servants, a bath and ... and a natural Yakchāl (ice pit) 130 meters away from the garden. Bahlgerd is actually the outer part of the building called Emarat (mansion) or Kooshk (pavilion). The introduction of Bahlgerd Garden with respect to its unique features in comparison to the Persian garden is considered a valuable functional element. This garden as one of the historic gardens of Birjand plays a major role in offering a general pattern for the gardens of this type and varies in specific details.

Location and Situation

Bahlgerd Garden, like many other historic gardens of Birjand, is located alongside the residential fabric in rural areas. Nevertheless, there is a long distance between Bahlgerd Garden and the rural fabric, which is not practiced anymore in Birjand. Most of agricultural fields are situated between the garden and the village that separate the garden from the rural fabric (Fig. 1).

Along the village of Bahlgerd, on the western side of Bahlgerd Garden, there is a seasonal river from which the water flows from Bagheran Mountains to the valleys in rainy times. Thereafter, it irrigates the flat plains where...
the villages on the margins of the village of Bagheran lie. In other words, the agricultural fields of the village and Bahlgerd Garden are situated in the fertile soil of the seasonal flood waters.

The Main Axis of the Garden
Bahlgerd Garden of Birjand has one main axis, which is defined by pine trees; a dominant species that seems like a reasonable choice in the climate of the region. The main axis of the garden has a northern-southern direction surrounded by two pine tree rows. The proportions of the main axis of the garden are stimulating and visualize a long narrow axis with the long pine trees (Fig. 2). The height of pine trees is proportional to the width and length of the axis and make a path with infinite perspective leading to at the entrance. This openness of visible landscape adds to the vast landscape that is one of the features of the Persian garden.

"The main axis in Persian is the central spirit and essence of the garden reflecting eternity, glory, infinity and revelation. taking advantage of all the opportunities that virtual and built perspectives provide in the space, the main axis offers an infinite landscape that invites the viewer without trying to display an arranged landscape of the garden" (Mansouri, 2005: 59).

The width proportions to the height of the trees in the main axis of Bahlgerd Garden of Birjand indicate its constructive focus on creating a deep and immersive view (Fig. 3).

The Pavilion of Bahlgerd Garden
The pavilion of Bahlgerd Garden does not have the general function that it has in the Persian garden. Alike the traditional Iranian houses, the pavilion in this garden has is an introvert function. It focuses on the private spaces rather than having distinctive entrances from the outside facing the main axis. It has a residential function like a royal house. In fact, this garden is a mixture of the primary shapes, with the geometry of a Persian garden and a traditional house.

Alike other gardens of Birjand, the eastern-western elongation of the mansion has created a functional axis perpendicular to the main axis, except that the main axis does not extend to the front of the mansion, and the platform, the pond and the trees create a spatial discontinuity (Fig. 4).

The southern courtyard, which is intrinsically the private space of the garden, has an entrance vestibule from the north. The existence of an octagonal platform in the center of a small scale pond, the fence and the visibility of

Fig. 2: Bahlgerd Garden plan. Source: Archives of South Khorasan Cultural Heritage Organization.

Fig. 3: The view from the main axis to the main entrance on the northern side and absence of water in the axis. Photo: Mehdi Fatemi, 2005.
the open space on the northern side of the main axis of are the other features of this garden (Fig. 5).

The Garden Geometry
Along the main axis, the yards emphasize on the garden geometry, and the prevailing geometric principles of Persian gardens is also visible here. Most of the places in the garden is allocated to the geometric yards used for cultivation, and it can be said that the owner of the garden somehow had his/her own agricultural field in the garden enclosure and used them.

The garden geometry, which has been formed by yards rather than the middle axis, indicates great changes in the geometry of yards and the functional and secondary axes throughout time due to the asymmetry and disharmony to the whole garden. Therefore, one cannot address the exact geometry. It seems that the southern zones behind the residential space, which should have been agricultural fields like the northern fields, belong to the garden and have been separated from the garden at different times and given to the villagers for agricultural purposes. By joining these fields to the garden, the overall geometry and structure is completed (Fig. 6).

The presence of agricultural fields on the margin of the main axis and the long structure of this garden are also observed in Akbarieh Garden of Birjand, Dolatabad Garden of Yazd, Fathabad Garden of Tabriz and Haft Tan garden of Shiraz. In these gardens, the main axis of the garden has divided the plan into two parts.

The Presence of Water in the Private Space
There is no water path in the middle of the garden, and they are used only for irrigation of the trees. In the main axis of the garden, there are only two rows of pine trees are on both sides. The pond located in the outer garden of Bahlgerd functions more as a water source; because if it was designed for reflection and for aesthetic purposes, its elongation should be in the direction of the pavilion to reflect a greater part of the pavilion, not in the direction of the axis (Fig. 7).

Conclusion
Due to the vastness of cultivation in this garden, this place Due to the vastness of cultivation in this garden, this place had a permanent residential function. This garden with a dominant recreational function for the governors varies from other Persian gardens. However, considering the situation of the garden that is located next to a village away from the city and government center, it is more likely that this garden was a recreational garden. Moreover, there are evidence and field observation documents suggesting that the agricultural purposes prevailed the ornamental and aesthetic aspects of the garden.

The pavilion of Bahlgerd Garden, besides being extended on one side of the garden, has another feature. This pavilion functions as the main entrance in the front of the main courtyard; meaning that the front side of the pavilion is just a passageway. Having passed along the main axis where it is assumed that the yard has led to the pavilion, the observer finds him/herself in front of
an entrance hall of a mansion with a courtyard in the middle. Having passed the entrance, the observer reaches the vestibule that leads to the inner private garden and the two-floor pavilion is displayed on the southern end of the private courtyard.

This two-story pavilion is added to the building in the early days of Pahlavi era according to the information and interviews of South Khorasan Cultural Heritage Organization. Assuming that this claim is true, it can be concluded that the pavilion of the garden was a one-floor building and the garden mansion with special private features intended to sustain the privacy of garden residents.

On the other hand, the absence of a high point for a better view to the gardens and the current conditions of the garden suggests that, except for the pine tree axis, the agricultural fields did not have a viewing value.

The presence of a water pond in front of the front side of the mansion in the garden (the entrance of the private garden), and its location does not seem to suggest the reflection of building in water and confirms the insignificance of this side of the building. The main pavilion should be sought inside the inner private garden. Therefore, playing with water and aesthetic use of water is not observed in this garden.

In the hypothesis of the residential and non-governmental function of the garden, considering this garden as private garden due to absence of ceremonies and using the main space of the gardens for agriculture seems logical. Recreation and pleasure functions also existed in the private garden and the presence of the platform, the two-floor façade of the pavilion, proximity to the bathroom and the being distant from the stalls of the southern side of the building admits this idea. Therefore, the function of the main garden (outer garden), which has the geometry of the Persian garden, was to support the residential function. This can be considered the distinction between Bahlgerd Garden and the other gardens of Birjand. In those gardens, despite being cultivated, the landscape was chosen to be seen from the pavilion; however, in Bahlgerd Garden, which has a simple function, the choice of a landscape to be seen from the garden axis was in the second priority.

Bahlgerd Garden is a prototype for the Persian Garden in Khorasan region; because the sacred aspects of garden and the inexistence of permanent residential spaces in the garden were not realized. Having a simple plan, the garden is given an agricultural and residential functions and no governmental and aesthetic aspects are seen in this garden. Other gardens of the Khorasan, including the Shoukatabad and Akbariyah Garden follow this prototype with small changes.

Therefore, the inner garden of Bahlgerd is considered to
be a completely exclusive residence, and the outer garden had an agricultural function. Hence, no prevailing recreational purpose or domination of aesthetic over function is observed in this garden. The reasons are as follows:

- Lack of a magnificent entrance;
- Lack of strong and well-designed functional axes;
- Lack of a view to pavilion façade in front of the axis or change of angle or existence of a two-floor building for having a better view;
- Presence of many agricultural fields in the outer garden;
- Presence of a water pond with recreational purpose and a platform in the inner garden;
- Having a distinctive façade on the sides facing the central courtyard in the building;
- Uneven distribution of service spaces in the gardens and their focus on the inner spaces.

**Footnote**

1. Two names of Bagheran and Baghran is used for these mountains which refer to a place or a sacred origin.
2. The dominant wind of Birjand is in northeast-southwest direction and the old fabric of Birjand has the same (Rasteh) direction. This wind lowers the temperature.
3. This issue was quoted by the head of the Cultural Heritage Organization in a statement from Tasnim news agency on November, 23, 2016.
Bahlgerd Garden, a Prototype and a Pattern for Gardens of Birjand | M. Fatemi

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