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Identifying Types of Open Space in Historical Gardens of Birjand Rahim Abad, Amir Abad, Shokat Abad, Bahalgard, and Akbariyyeh Gardens

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Abstract

The garden is essentially an extensive open space that can include various types of closed spaces within. However, in some cases, there are various types of open space combined in the garden according to defined arrangements. This poses a new form and a variation in the structure of the classical Persian Garden, which is the subject of the present investigation.

The general scheme of a Persian Garden is a wide and open space, and in the case of gardens of Birjand, garden space that is integrated with other types of smaller scale open spaces to create new combinations. These gardens are similar in structure, composed in an orderly yet simple layout and integrated with smaller open spaces. These auxiliary spaces range in scale from a small yard to an extensive area like a garden itself. They can even be the size of a bay of a mahtabi in front of the main building which overlooks the whole garden or can be the size of a stone-paved roof that looks out on its surrounding plains. These open spaces attach to the garden space in a number of ways, each with a distinct function. They include the andaruni courtyard, open courtyard, loading area, entrance yard, mahtabi, roof, soffeh, sharemi, meydan-cheh, jelo-khan, and orchard.

The main function of these spaces relates to the residential aspect of a garden, i.e., they either form a private andarun area, or grow larger to house different activities pertaining to residential life in a garden, and important enough to be landscaped. Moreover, other types of these spaces provide special views to the garden, contributing to the recreational aspect of a garden. In addition, there are other spaces that create hierarchy and provide the possibility of extension of the garden space, or define a zone around which buildings can be arranged, all of which relate to the geometric structure of a garden. These spaces denote a special way of life which is investigated and categorized in this paper. Examination of gardens of Birjand is the clue to further research on Persian Gardens, and essential to determining whether other not-yet-studied gardens of Iran pose the same spatial combinations.

Keywords

Persian garden, Landscape of open space, Historical gardens of Birjand, Courtyard, Residence, Pleasure garden.

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Introduction

The Persian garden is a multi-layered phenomenon, each of whose layers can be studied to expand our knowledge of its various aspects. On the other hand, in spite of its unique entirety, varieties have emerged depending on different conditions. The case study of each or a group of these gardens in a historicalal-geographic area is necessary in order to discover and understand these varieties and a requirement for gaining a deeper knowledge of Persian garden estates. Among such case studies is the study of the gardens of Birjand desert region. One of its general results is the identification of the shared properties regarding physical form and forms of living.

In its entirety, the garden is a large open space that provides picturesque views. In Persian architecture, open space has been created in different forms and in small as well as large sizes, and paying attention to these spaces has always been as important as paying attention to closed and semi-open spaces. "The selection of the unanimous model of central courtyard in most traditional buildings gives a highlighted significance to open space and its design. This significance is multiplied by the special connection of the yard with its surrounding closed spaces, and consequently, the yard becomes the focus and center of the design" (Navai and Haji Qassemi, 2011: 317). Open space is formed in small as well as in large courtyards, yet in a broader sense, it shapes the space of a Persian garden.

Based on known examples, the image of a Persian garden is that of a quadrangular open space (rectangle or square), inside which a pavilion is located either at the center or toward one end of the site. The garden layout is based on a simple and fine geometry with a central or axial arrangement, and it is landscaped by vegetation and water like the Chehel Sotun in Isfahan and the Jahan Nama in Shiraz. In other cases, architectural constructions have extended along the margins of the main area and transformed the general profile of the garden into a central courtyard, as in the Arg-e Karim Khan in Shiraz. However, there is also another type of arrangement in which annexed open

spaces appear on the margins of a garden, giving a new general organization to shape a complex. Among the most common instances of such additions is the forecourt at the entrance of a garden, like the forecourt of the Dolat Abad garden in Yazd and Qadamgah of Neishabur, located following the general structure of the garden along its geometrical axis.

Another type of open space arrangement can be observed in historical gardens of Birjand¹. While mostly used for pleasure or ceremonial purposes, these gardens were a place for a long or permanent residence of their owners as well. Consequently, the spatial arrangement in these gardens is a combination of the well-known spatial entirety of Persian garden and various types of small open spaces formed beside closed spaces and served the living needs of the garden's owners or residents. These open spaces are not necessarily in line with the geometrical axis of the garden; nevertheless, they are located generally in an organic arrangement, creating a complex on one side of the garden.

The significance of small open spaces in these gardens is notable, and it raises the question that what features there are in the function or design imperatives of these gardens that lead to the emergence of such arrangements, and whether such small spaces or spatial arrangements can be identified in other not-yet-studied Persian gardens.

Aim. This study is aimed to pave the way for various case studies on Persian gardens, an instance of which can be the recognition of small open spaces in the gardens. Focusing on gardens of Birjand, it aims to answer the following questions:

1. What types of small open space exist in gardens of Birjand?
2. What is the relationship of these spaces to the garden?
3. What is the role of these spaces in the life of a garden?

Although gardens of Birjand are among desert-region gardens of Iran, the space of this paper allows neither the comparative study of Birjand gardens and those gardens nor the generalization of the hypothesis because each group of such gardens requires particular case studies depending on their geographical or

historical conditions.

This paper is a case study research which investigates and analyzes the small open spaces in gardens of Birjand. Due to lack of documented or written historical data and defects of available documents, the research methodology is mainly based on field studies and surveys as well as local investigation and oral reports. Moreover, written sources, visual documents as well as analysis of fieldwork using maps, photographs, and images were employed for deductive reasoning in this research.

The research background includes studies related to historical gardens of Birjand, as well as analytical studies on open spaces. Since most of the historical gardens of Birjand have not yet been studied, most research has simply introduced them. The registered files of the Cultural Heritage Organization describe a limited number of them. Ali Alai (2015) and Soroush and Za'faranlu (Fall 2011) give a comprehensive list of these gardens, either just mentioning their name and location or presenting a general description of their garden space and architecture. Among available

sources, only in a paper by Ehsan Ranjbar, et al. (Fall-Winter 2005)² some of these gardens are introduced and compared with other Persian gardens, and the subject of annexed yards is only mentioned briefly. Although there are relatively a vast number of studies about open spaces, the range of analytical studies among them is limited, including those by Navai and Haj Qassem (2011), Ha'eri (2009), and papers by Mahvash Alemi³. However, most of these studies, whether in theoretical or physical terms, are focused on the courtyards of houses or the spaces of famous Persian gardens. Accordingly, the examination of annexed open spaces in gardens of Birjand based on the questions of this study poses a new subject matter with limited sources, which has not been studied to date.

A. Birjand and its historical gardens

The city of Birjand and its periphery are located in the Birjand plain, which is inside the watershed of Bagheran, Momen Abad and Shekarab mountains. Due to these surrounding mountains, the region enjoys a temperate climate, and it has been possible to dig

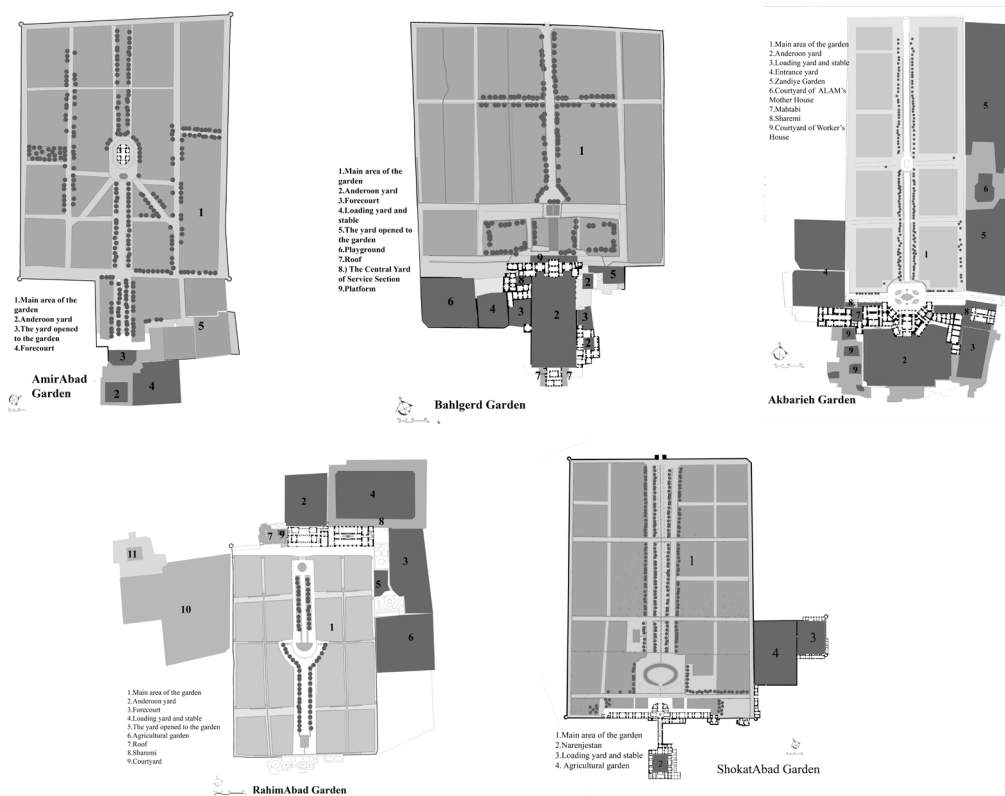


Fig. 1. Historical gardens of Birjand. Source: authors based on Iranian Cultural Heritage Organization File maps, and National Geography Organization of Iran aerial photos of 1335 (1956).

qanats [man-made underground water canals] starting from the slopes. The qanat is a life-giving element in this plain, because of which many gardens were built around the city of Birjand. The most important gardens in this region are Akbariyyeh, Rahim-abad, Shokat-abad, Amir-abad, Bahalgerd, Seyed-abad of Bahalgerd, Haji-abad, Sarab, Ma'soumiyyeh, Manzariyyeh and Amir Abad Sheibani⁴. Most of these gardens belong to members of 'Alam family (the ruling family of Qa'emat), while other gardens belong to rich landowners of the region. They all have a similar form and structure, which is a simple, enclosed area with an axis covered by pine and cypress trees, and a number of architectural elements and smaller open spaces gathered at one side of the garden (Fig. 1). Simple, semi-rural architecture and landscape architecture plus various types of open space in each garden poses a unique form of the Persian garden.

B. Different kinds of open spaces in historical gardens of Birjand

The study of historical gardens of Birjand shows that besides the main garden space, there are eleven types of open space which can be divided into five general classes:

1. The main area of the garden;
2. Annexed yards including the andarun, the yard opening onto the garden, stable yard, loading yard, and entrance yard;
3. Open spaces overlooking the garden such as the mahtabi, rooftop, sharemi, and platform, all of which provide viewpoints since they are higher than the garden area;
4. External spaces such as meydan-cheh [Small Square] and forecourt;
5. Agricultural gardens for farming purposes, which are annexed to the garden.

A. The main area of the garden

The primary garden area is the main and largest part of a garden (from one to nine hectares) on which the identity of the garden complex depends, and other spaces are marginally located around it. In these gardens, the main area is a quadrangular space (in the

shape of a rectangle, square or trapezium) generally surrounded by mud brick walls on three sides, and by the main building on the fourth side. It is divided into two parts by a central axis. The axial avenue of the garden is flanked by cypress or pine trees⁵ or a combination of both, and no prominent water axis except flanking (or rarely middle) soil-bed streams⁶. In a number of these gardens, the middle axis is not paved. This is while in most gardens, the only paved area is the main avenue and the area opposite the garden building. The areas on both ends of the main axis are divided into smaller planting beds allocated in most gardens to growing various kinds of crops like jujube, pistachio, barberry, saffron and fruit trees. Nonbearing trees such as the plane, elm, and white poplar are less grown in these areas.

The study of these gardens shows that they are not so strictly arranged as other well-known Persian gardens which are mostly royal/state gardens but enjoy a simpler arrangement according to the same model.

B. Andarun yard

Most of the gardens were not used solely for ceremonial purposes, but as permanent or temporary residential places as well (at least in some months of the year), for which they had the particular andarun. In most of them, the garden building is constructed along the smaller side of the garden, and there is a yard behind it which is known by the residents as the andarun yard (backyard). (Jannati-far, personal interview, 2016) This yard plays the role of a more intimate space than the main space of the garden. It emerges in some gardens as a central courtyard providing a completely veiled space, around which there are residential spaces. The backyards of Amir-abad and Shokat-abad gardens are examples of this type.

Most backyards are connected to the main garden area via a corridor or corridors, making a continuous yet limited connection between the yard and the garden.

Most backyards are landscaped with water and greenery, and in some of them, the water tank or the reservoir is located in this yard. Examining the landscape of these yards, a relation between the andarun function of yards and the structure of the

landscape can be found. The yards that take on the role of a residential central courtyard have a more arranged structure of planting beds and enjoy the presence of water.

Although the prevalent idea that the andarun only refers to backyards in these gardens, there are also other yards in the gardens which can be considered as andarun yards. There are smaller yards among secondary residential or residential-service spaces around the garden, which generally have very simple layouts without particular landscape ornamentation.

C. Yard-open-to-the-garden

The yard opening to the garden is an open space inside of the building that, following the form of the building, is enclosed on three sides, and is open to the garden on its fourth side, making a continuous connection with it. In cases in which this yard is present, it opens along the main axis of the garden, and it has an orderly geometrical structure plus a defined landscape. Sometimes, the garden tank is located in the middle of this yard following the geometry, like in the gardens of Amir Abad, Seyed Abad, and Sarab. However, in other gardens, this yard falls to a secondary status, i.e., it is located among the secondary buildings and does not follow the main geometry of the garden. No strict geometry or landscape arrangement is observed in gardens of the latter group, such as Bahalgerd and Rahim Abad.

In both cases, however, the yard-open-to-the-garden delineates a distinct annexed space, while paving the way for connecting the building with the main area of the garden.

D. Loading yard and stable

Most gardens of Birjand have a service space known as the loading yard and stable, which consists of a yard around which or at one side of which the service buildings are located. Since this space was a place for keeping cattle or storing crops and other materials, it is in the simplest form without plants or fountains or pools. Only in some instances, there is a row of trees or a loading platform in the middle. Generally, this area has direct access to the outside and indirect connection to the garden area.

E. Entrance yard

The entrance yard is like a forecourt at the entrance of the garden and enclosed within its walls. The entrance yard is seen only in Akbariyyeh garden, which was built as a result of the garden expansion during the Pahlavi period. This yard is located along the extension of the open space opposite the building and provides a closer access to this building. Large parts of it are covered with vegetation, as well as with cypress and pomegranate trees. In connection with the main area of the garden and while delineating a distinct space, this yard expands the greenery of the garden.

F. Mahtabi

The mahtabi is an open space higher than the courtyard or the garden level, yet preserving the visual and spatial connection with them. It is often enclosed on three sides, and connected to the main open space on its fourth side (Salehi, et al, 2010: 59). While expanding the garden area on a different level, it also provides a distinct and more private space.

Although the mahtabi area does not have any vegetation or fountains, it provides the opportunity of a commanding view over the garden, which makes it a pleasant space.

G. Rooftop

The rooftop is an independent, uncovered space composed of many connected surfaces. Blind arcades or low walls enclose some of its edges, and like a mahtabi, it can be used during summer nights (Ha'eri, 2009: 126). On the other hand, the rooftop is also a vantage point, because it is also possible to view the extent of the garden and its surrounding lands from above the rooftop.

H. Sharemi

The sharemi is an elevated corridor surrounding an open space (Salehi, et al, 2010: 59). Besides providing access to various spaces as a circulation path, it also provides an overlooking view of the garden area like the mahtabi and the rooftop.

I. Soffeh

The soffeh is a large platform overlooking open space and in front of one side of the building (Navai and Haji Qassemi, 2011: 359). In Bahalgerd

garden, there is a soffeh in front of the northern building towards the garden area, located on the northward slope, and seven steps higher than the garden area. It provides a good view of the garden. Considering the fact that this building is a secondary building, it seems that constructing a platform was a more reasonable and economic option than other options of providing vantage points.

J. Meydan-cheh⁷

A meydan [square] is a vast open space for different kinds of games and sports like polo, horse-riding, and shooting, or holding ceremonies (Navai and Haj Qassemi, 2011: 359). Adjacent to the Bahalgerd garden, there is a small, enclosed and unpaved square with no vegetation, which opens to the garden on one side, to the stable at another side, and to the outside on the third side. According to oral history, this area was used to play

local games.

K. Forecourt

The forecourt is an open space located before the portal and in front of it, and so it is among the elements of entrances (Navai and Haji Qassemi, 2011: 358). In historical gardens of Birjand, the forecourt is not located along the garden axis. As there are no spectacular portals in Birjand gardens and the entrance has a simple form, the forecourt, if existing, is a plain area that is distinct from the surrounding environment only by means of the form of the garden wall or a row of trees or a combination of them.

The forecourt is connected to the main garden area or the andarun yard through the portal or the entrance of the garden, and it usually has access to service spaces.

L. Agricultural Field

In the general sense, the word bagh in Birjand denotes any kind of enclosed land in which trees are planted,

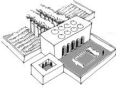
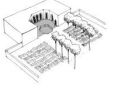
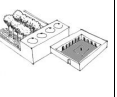
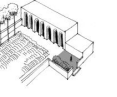


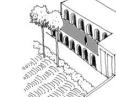
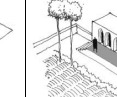
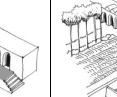
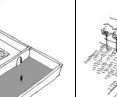
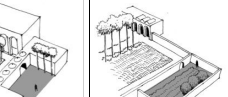
	Anderoon yard	The yard opened to the garden	Loading yard	Entrance yard	Mahtabi	Roof
Location relative to the garden's area						
In gardens	Akbarieh, RahimAbad, AmirAbad, ShokatAbad, Behelgerd, Sarab, HajiAbad, Manzarieh, AmirAbadSheibani	RahimAbad, AmirAbad, Behelgerd, Sarab, SeyedAbad	Akbarieh, RahimAbad, Behelgerd, ShokatAbad, AmirAbad, Sarab	Akbarieh	Akbarieh, HajiAbad	RahimAbad, Behelgerd, HajiAbad
The ratio of area to the space's area (percent)	0.1-14	0.7-1	1-13	11	0.3	0.4-1
The ratio of the wall's height to the space's width	1-0.9 to 1-5	1-2.5 to 1-4	1-4 to 1-12	1-6.5	1-2	
	Sharemi	Platform	Small-square	Forecourt	Agricultural garden	
Location relative to the garden's area						
In gardens	Akbarieh, RahimAbad, HajiAbad	Behelgerd, Manzarieh	Behelgerd	RahimAbad, HajiAbad, Behelgerd, AmirAbad, ShokatAbad, AmirAbadSheibani	Akbarieh, ShokatAbad, AmirAbadSheibani	
The ratio of area to the space's area (percent)	2	0.6	4	0.4-7	5-37	
The ratio of the wall's height to the space's width	1-1.25	1-1.5	1-12	1-2.5 to 1-12	1-12 to 1-20	

Fig. 2. Different kinds of open spaces in historical gardens of Birjand. Source: authors.

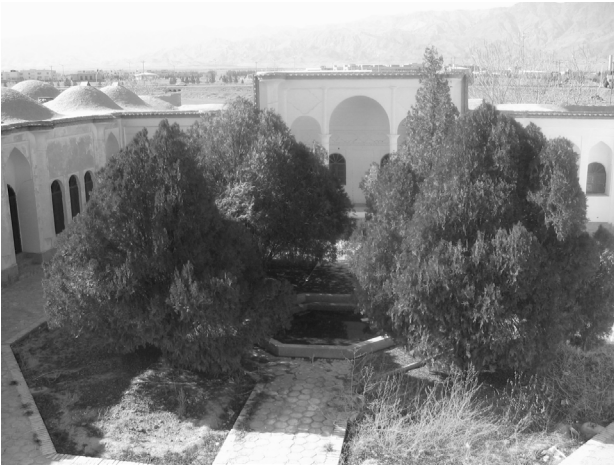


Fig. 3a. Anderoon yard of ShokatAbad garden (Narenjestan yard)
 .Source: Registered files of the Cultural Heritage Organization.

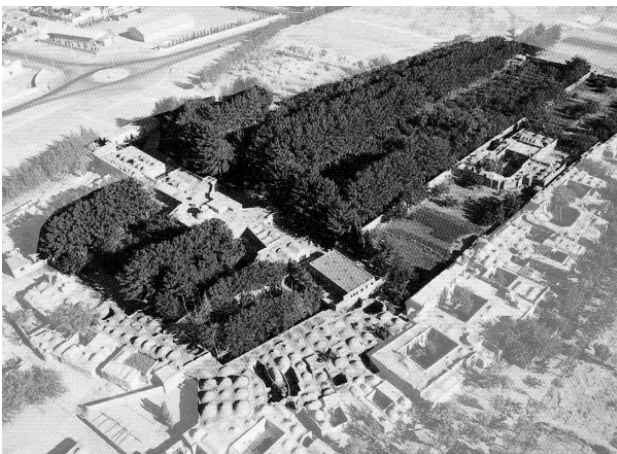


Fig. 3b. Numerous yards around Akbarieh garden. In the eastern part: agricultural garden and anderoon yard of the ruler's mother house and, in the southern part: loading yard, anderoon yard and entrance yard.
 Source: Jasim Ghazbanpour's Archive, 2000.

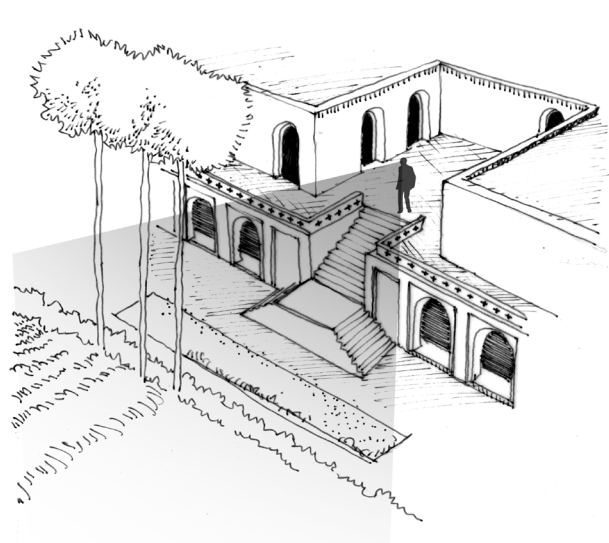


Fig. 4. Mahtabi in Akbarieh garden and the possibility of viewing the garden's area. Source: authors.

or which is used for farming (Soroush, 2011: 28). Adjacent to several gardens of Birjand, there are vast enclosed lands allocated to farming and growing vegetables. Adjacent to the Akbariyyeh, Shokat Abad, and Rahim Abad gardens there are agricultural fields which are connected to the main garden area via a number of openings. These plots are divided into planting beds covered with farming soil and vegetation.

Besides the above-mentioned, also other small spaces or defined areas can be identified among open spaces of these gardens, for example, islands inside pools, which exist in some gardens. There is an octagonal platform on the southern pool of the Bahalgerd garden, which is accessible via two brick bridges. In the Akbariyyeh and Shokat Abad gardens, this platform forms a large area which is surrounded on three sides by water. These spaces, while integrated with the garden area or its courtyards, also define their own distinct space within it.

The function of annexed open spaces to the garden

Although each annexed open space to the garden has its own specific and independent structure, it is also related to the entirety of the garden. Located inside the garden complex, these spaces complete it from different aspects. This paper examines the role of these spaces in contributing to the residential and pleasure aspects of the garden and their impact on the geometrical structure of the complex.

A. Contribution to the residential aspect

Most historical gardens of Birjand were residential gardens in which life flowed fully. Various types of open spaces were somehow satisfying the residential needs in the garden. The main aspect of such satisfaction was providing privacy for the residents. Although the garden interior is distinct from the surroundings in a broader scale, due to its productive role and the agricultural life current in it, as well as its local governmental status, the garden area was a place for affairs of farmers, gardeners, and servants as well as governmental visits. Thus, the interior of a garden

turned into a public space and living in the garden required a private place. Making or defining a private zone creates a sense of protection and tranquility in a person (Salehi, 2007: 101).

Although in a sense, “inwardness” [paying more attention to the interior space than the exterior] can be observed in the pavilions of Persian gardens as well⁸, by allocating an open space to the andarun and locating residential spaces around it, it was made possible to live inside a more private abode.

On the other hand, an agriculture-based life includes a vast number of other activities like farming, storing and preparing crops, keeping livestock as well as agricultural machinery, providing residence for farmers and gardeners, offering service to workers, etc. most of which require open areas. The multiplicity of open spaces in a garden is an opportunity for organizing the mentioned activities in a single complex, while the privacy of residential, agricultural, service and

governmental zones is also maintained.

B. Contribution to the pleasure aspect

One of the contributions of open spaces in the garden is regarding the pleasure aspect⁹. Pleasure is one of the main purposes in the creation of Persian gardens. “If we pay attention to life in a Persian garden, we find out that it was not built just for producing fruits or enjoying the shade of trees nor for beauty, but for recreation and pleasure” (Beheshti, 2008: 12).

On the one hand, some open spaces such as the mahtabi, platform, sharemi and rooftop make it possible to view the landscape of the garden with their dominant position, and being in such places gives the viewer a sense of pleasure and joy since looking at nature itself is a major pleasure in the Persian context (Fig. 4).

On the other hand, landscape arrangement of the annexed open spaces complemented the garden landscape and provided an opportunity for pleasure.

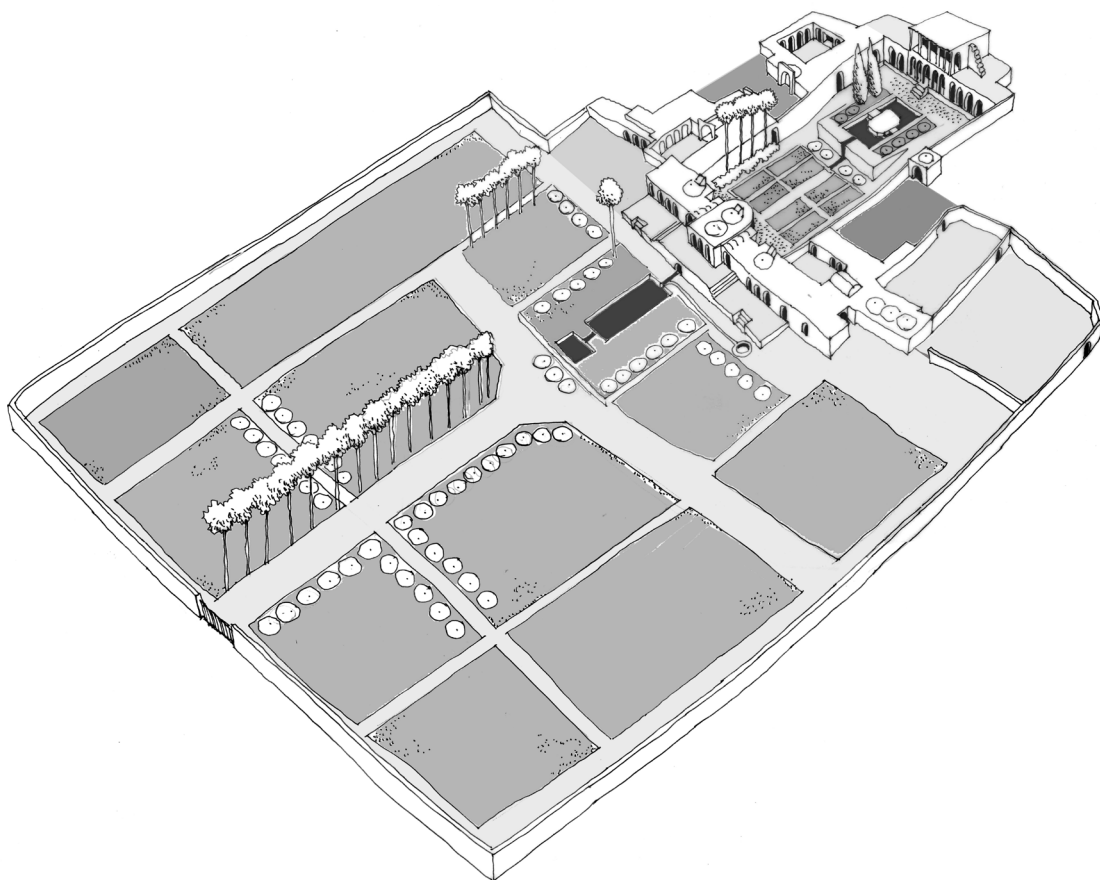


Fig. 5. General view of Behelgerd garden, the difference between the landscape and size of the anderoon yard and the garden. Source: authors.

In all, various kinds of Persian gardens can be regarded to stand in a continuum between the two ends of production and pleasure. In Persian garden arrangements, pleasure is a sign of prestige, whereas economically, production is the most important element. Standing in the middle of this continuum¹⁰, historical gardens of Birjand contribute to the pleasure aspect while also serving a productive purpose. This has led to the allocation of major parts of their area to farming and production. In this case, the landscape design of annexed open spaces in the garden enhances the pleasure aspect of the complex.

The landscape design in the backyard of Bahalgerd garden, among other small open spaces of these gardens, is the most outstanding. Although some efforts can be seen in the arrangement of the main garden area like highlighting the central axis and the locating of the pool, a different kind of garden arrangement (landscaping) can be observed in its andarun yard.

Due to the one-meter difference in height, a stone wall divides this yard into northern and southern parts and two side ramps connect them. At the center of the southern part, there is a rectangular pool that has an octagonal platform in its middle, making it possible to sit on water. Adjacent to this pool, there are two rectangular flowerbeds covered with cypress and pomegranate trees. From the center of the northern side of the pool, a water channel flows into the northern area of the yard through the dividing stone wall and waters the lower flowerbeds. The northern section of the yard is divided into four parts, and each part is divided into two planting beds. This section of the yard is surrounded by tall pine trees, which are in line with the trees planted along the middle axis. Underneath these trees, there were Persian roses and barberry bushes, the traces of which still remain. The northern and southern sections of the yard, in front of the northern and southern buildings, are covered by stone and brick paving, some parts of which still remain.

The presence of the pool and its middle platform, channeling system, paving, level difference and water

falling, organized beds, and the use of non-bearing trees, as well as decorative plants, are elements that keep the pleasure quality of this courtyard high. Although the yard is smaller than the garden area, due to the above-mentioned arrangement, as well as the position of the Shah-neshin Building and the aiwan towards this yard, the pleasure aspect is more highlighted in the courtyard than in the garden area. Moreover, the presence of a simpler pool in the garden than that of the yard, lack of paving, presence of bearing trees, simplest form of bedding and channeling, and the weak relationship between the building and the garden in the main area, contribute to this effect (Fig. 5).

The contribution of annexed open spaces to the pleasure aspect in the garden can also be studied from another perspective, and that is the exclusive allocation of some open spaces to pleasure. An example could be observed in the meydan-cheh of Bahalgerd garden, which is a space for local games.

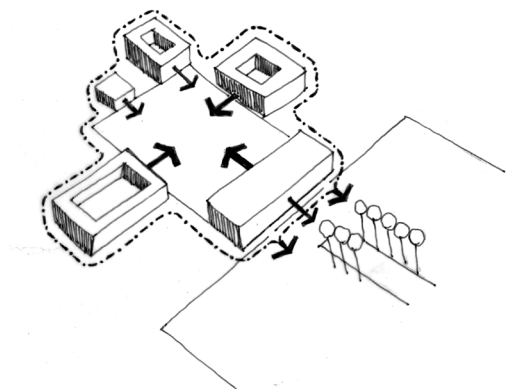


Fig. 6. The yard as a combining space for annexed open spaces in the garden. Source: authors.

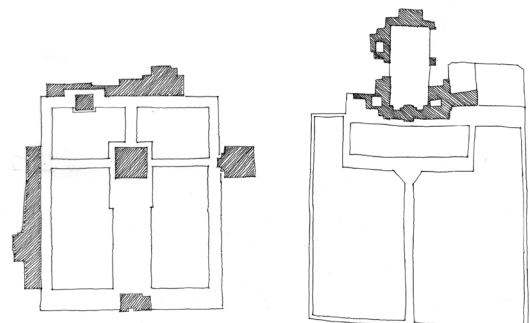


Fig. 7. The small yard in Behelgerd garden (right) and the vast garden area in Fin garden (left) both as combining space for annexed spaces. Source: authors.

The impact on geometrical and spatial structure of the garden

• Annexed open spaces, integrating the garden complex

In most historical gardens of Birjand, the main and secondary buildings of the garden are on one side,

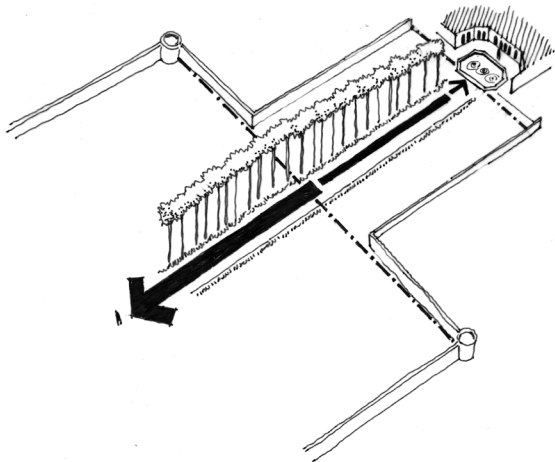


Fig. 8. The hierarchy from small yard(open-to-the-garden), to the garden's vast space. Source: authors.

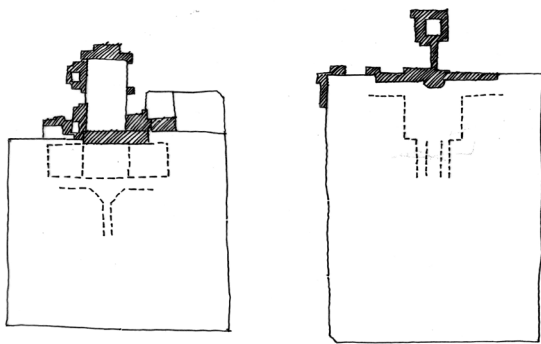


Fig. 9. Creating hierarchy of space, via dividing the area opposite the building: ShokatAbad and Behelgerd gardens. Source: authors.

generally filling the smaller side of the garden area in several layers. Although the garden area is the main purpose in the creation of the complex, due to the concentration of buildings on one side of that area as opposed to a central location, the garden area does not integrate different spaces, and makes a rather unilateral relation with the main building as well as other buildings in the garden. Conversely, each annexed open space is enclosed within a number of

roofed spaces which gather to create a small complex attached to the main garden. Sometimes a number of these small complexes are located beside each other around a larger open area, and the whole set is connected to the garden on one side (Fig. 6).

The gathering of spaces in smaller groups distinguishes functions and organizes similar activities alongside one another. Organizing similar spaces around a quality center results in intimacy and integration of adjacent spaces beyond functionality, an instance of which is observable in residential spaces of Amir Abad and Shokat Abad gardens laid out around a central courtyard. “Integration of spaces and unified spatial organization makes a closer connection between the residents by creating a kind of centrality and convergence” (Salehi, et al, 2010: 71). The organization of roofed spaces of the garden (which are livable places for residents) around small yards and the unilateral connection with the garden area not only creates a closer relationship between spaces but also makes the landscape arrangement along the four sides of the garden unnecessary. Only one side of the garden area and the central axis are landscaped, as the garden area can be viewed directly and continuously from the roofed spaces located at one side of the garden, i.e. the area opposite the building. Reviewing cases whose main area integrates different sections of the garden and comparing them with what is presented here elucidates this statement (Fig. 7).

• Annexed open spaces, intermediary in connecting garden space and architecture

Although the buildings in historical gardens of Birjand are among outstanding buildings of the region, most of them have a simple, non-decorated semi-rural form, boasting significant difference with buildings of the famous Persian gardens. On the other hand, although they are not profusely cultivated, the vastness of the garden per se gives a special value.

In some gardens, the connection of these simple buildings to the vast area of the garden is made via a hierarchy of open spaces that creates a gradual connection between the two. The yard-open-to-the-garden, as in the Amir Abad, Sarab, and Seyed Abad-e

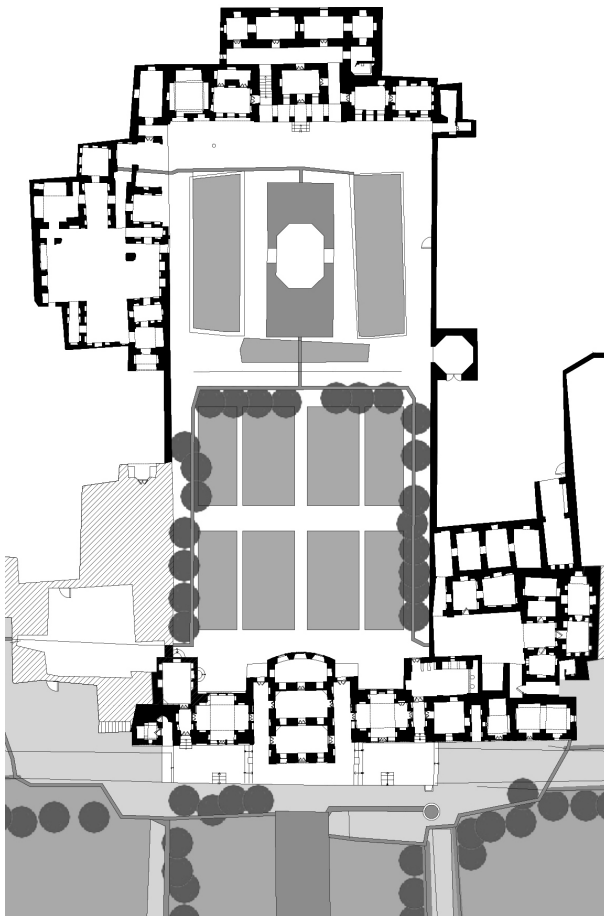


Fig. 10a. The annexation of western part of the building in Akbarieh garden via entrance yard.
Source: authors.

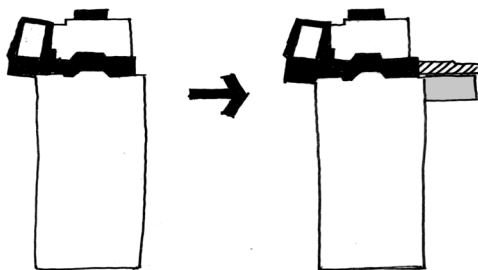


Fig. 10b. The annexation of southern part of the building in Behelgerd garden via anderoon yard. Source: authors.

Bahalgerd gardens, is an element of such hierarchy. This yard creates a small-scale space inside the building, from which a person can view the garden from the open side, while enclosed in the scale of the yard. In the Amir Abad garden, the central pavilion is in the middle of the garden, and has a prestigious status due to this location; however, the simple and small-scale residential building on the eastern side is also skillfully connected to the garden. In the middle of this building, there is a yard-open-to-the garden in the shape of a nim-hasht that features a pool and dense trees at its heart and provides the residents with a taste of the main garden and its views.

The axis of the garden starts from opposite this yard and moves forward in a larger courtyard until it finally reaches the main garden area. Consequently, a hierarchy of open spaces including an open yard to the garden, an intermediary courtyard, and the main garden area is sequentially arranged in line with the main axis, and thus connects the simple, small building of the garden to the vast main area (Fig. 8). It should be mentioned that in some cases, such a hierarchy is achieved by articulation of the garden area opposite the building (Fig. 9).

The open yard to the garden, besides recreating the garden landscape in a smaller scale adjacent to the building and providing a transition to the garden area, it also functions as an ante-space, connecting secondary/service buildings such as the bathhouse, howz-khaneh, or the gatekeeper's lodge to the main garden area.

• Open spaces, a possibility for gradual extension of the garden

Since oligarchy owned historical gardens of Birjand, they were not built all at once, rather, the owners and their heirs developed gardens along different periods. The Akbariyyeh garden, for example, was first built in the late Zand Period as a small garden with a simple building by Amir 'Alam Khan III Heshmat al-Molk, and later completed by the 'Alam family in its current form in the Pahlavi period (Soroush, 2011: 32). The annexed open spaces of the garden provide the possibility of such gradual developments whether in

the extension of buildings or of agricultural lands. In gardens of Birjand, the addition of new buildings to the complex was done in two ways; first, the addition of a new building attached to the old building of the garden. In this case, if the garden space did not allow for the addition of the new building, a new yard was annexed to the garden space, and the new construction joined the old building facing this yard. In this situation, while the garden retained its integrity, the new building formed in its opposite yard. In the Akbariyyeh garden, almost all of one side of the garden is occupied by a Qajar building; thus, in the process of constructing the Pahlavi building in line with the previous building, a yard was added to the west of the garden (entrance yard) which provided the possibility for connection of the new and old constructions (Fig. 10a). The second case is when the new building is detached from the old one, in which the new building is constructed in a distance from the old building or the garden area, and a defined open space connects these two parts. The best example of this case is the extension of the Shah-neshin Building of Bahalgerd garden in the southern

part of the complex via the andarun yard (Fig. 10b). On the other hand, in a number of historical gardens of Birjand, there are also several open and enclosed spaces formed around the garden, which are allocated to secondary functions like growing vegetables, however, they may be abandoned altogether. These open spaces potentially provided for the extension of the garden area in the course of time, gradually adding to the cultivated lands of a garden.

Examination of annexed open spaces to five of historical gardens of Birjand, which are relatively intact and could be studied more accurately, has demonstrated the need for more research on this subject. These types of space can be studied in other Persian gardens in different regions of Iran.

The key question for further studies will be that to what extent Persian gardens, whether royal or local-governmental or rural ones, are related to ceremonial and pleasure purposes on the one hand, and to residential as well as living conditions of their residents, on the other. Furthermore, what types and how many of annexed open spaces are formed in them.

Conclusion

Historical gardens of Birjand, higher in status than solely productive-rural gardens and yet lower in status than grand royal-governmental gardens, were the context of a landowner/peasant system and agricultural-based living. Only a few of them also had ceremonial and governmental functions, and even those enjoy a particular vernacular simplicity. These sizes of these gardens, which were constructed based on production and pleasure purposes, have changed gradually according to the power and financial conditions of their owners (mostly members of one family in the region). The gradual development of these gardens is itself a reason for appearance and increase of annexed open spaces in gardens.

Since daily life is current in these gardens, the annexed open spaces are a crucial part of the entirety of a garden. Although they are clustered in an organic arrangement to one side of the garden and do not influence its general outlook or the formal geometrical and spatial layout of the garden, they are among the vital elements of gardens. This is because each had an active role regarding residence in the garden or agricultural management of lands, and thus their existence was inevitable.

Each of these gardens is a combination of a large space and small open spaces including the main area of the garden and annexed open spaces which have a lot of physical and functional variety. The open spaces in these gardens include the main garden area, andarun yard, and yard-open-to-the-garden, loading yard, entrance yard, mahtabi, rooftop, sharemi, platform, meydan-cheh, forecourt and agricultural field. Each has its own kind of relationship with the garden and contributes to its totality.

The annexed open spaces were influential spaces for residence because they defined an intimate zone within the garden. In addition, considering the residential, agricultural and governmental structure of these gardens, such

spaces made possible the multiplicity of activities while respecting privacy.

On the other hand, these spaces enhance the pleasure aspect of the garden. This is sometimes done by providing a place for viewing the garden, and in other cases, by arranging the landscape in such spaces.

Another impact of annexed open spaces is on the geometrical and spatial structure of the garden. In most of these gardens, the buildings are not sited around the garden area but arranged around the annexed open spaces which are connected to the garden. On the other hand, they are sometimes intermediary spaces connecting the simple architectural constructions to the vast area of the garden. Moreover, the extension of gardens, whether in terms of buildings or in terms of cultivated lands, has relied on these types of spaces.

The combination of open spaces with the garden space demonstrates a new facet of Persian gardens which is based on living inside them. The scale and manner of landowner/peasant life in historical gardens of Birjand have led to the emergence of such combinations, and the annexed open spaces developed in response to this particular lifestyle and garden type. Therefore, it is recommended that the generalization to other Iranian landowner/peasant gardens be investigated in another study.

Endnote

1. See Ali Alai (2015). *Ashnayi va tahlil-e bagh-ha-ye tarikh-e rustai-e Iran* [The Introduction and Analysis of Historical Rural Gardens of Iran].
2. See Ehsan Ranjbar, Mohammad-Reza Mehrabani Golzar & Mahdi Fatemi (Fall-Winter 2005). *Daramadi bar shenakht-e bagh-ha-ye tarikh-e Birjand* [An Introduction to Historical Gardens of Birjand]. *Bagh-i Nazar*, 4:50-71.
3. See, for example, Alemi, Mahvash (Spring 2008). *Bagh-ha va hayat-ha-ye Irani* (Persian Gardens and Courtyards: An approach to Designing Contemporary Architecture). Translated from English by Meysam Yazdi. *Golestan-e Honar*, 11:106-112; or idem, (Fall 2006). *Bagh-ha-ye doreh-ye Safavi: gooneh-ha va olgu-ha* (The Royal Gardens of the Safavid Period: Types and Models). Translated from English by Mohsen Javari. *Golestan-e Honar*, 5:72-91.
3. These gardens are selected based on observations of the authors and on registered files of the Cultural Heritage Organization. Besides these gardens, there are nine gardens in this region named Ali Abad, Hasan Abad Behelgerd, Nofrest, Beidokht, Haqju, Khazimeh Behelgerd, Aiwan-e Keif, Bahraman, and Nobahar which have not been included in the study due to lack of enough information. See Ali Alai (2015), *Ashnayi va tahlil-e bagh-ha-ye tarikh-e rustai-e Iran* [The Introduction and Analysis of Historical Rural Gardens of Iran].
4. The plane tree is not easily adapted to climatic conditions of this region, and so the garden avenues are lined with conifers.
5. This axis is oriented in most gardens along the north-south direction to bar against destructive winds in the region (Setaviz:28).
6. A small square.
7. See Navai and Haji Qassemi (2011) p. 332.
8. "Pleasure" is used in this text equivalent to the Persian word "tafarroj."
9. See Bina, M. J. (2015) *Bagh-ha-ye piramuni-e shahr-ha-ye Iran, bagh-ha-ye Birjand* [Surrounding Gardens of Iranian Cities (Case Study: Birjand Gardens)]. MA thesis. Tehran: Shahid Beheshti University.

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