

Persian translation of this paper entitled:

جایگاه مزارع و باغ‌ها در شکل‌گیری و توسعه شهر تاریخی نراق
is also published in this issue of journal.

The Role of Farmsteads and Gardens in the Formation and Development of The Historic Town of Naraq

Ali Omranipour^{*1}, Hamidreza Jayhani², Fatemeh Rajabi³

1. Assistant Professor, School of Architecture and Art, University of Kashan, Kashan, Iran.

2. Assistant Professor, School of Architecture and Art, University of Kashan, Kashan, Iran.

3. M.A. of Architectural Conservation, Islamic Azad University, Central Tehran Branch, Iran.

Received: 06/02/2019 ; revised: 15/07/2019 ; accepted: 05/10/2019 ; available online: 22/07/2020

Abstract

Problem statement: The historic town of Naraq has gradually lost its trade-dependent economy over the last century; yet, its agricultural and livestock sectors around the town have remained. Therefore, the town has extensive connections with its suburbs. The water shortage, urban development, and land use change have endangered mazra'as (farmsteads) and gardens. On the other hand, initial surveys indicate a broad connection between farmlands and the urban structure of Naraq.

Research objective: This article aims to understand the role of farmsteads and gardens in the urban structure of Naraq. So, it will study the location of the farmsteads, gardens and agricultural lands in comparison with the early urban core of Naraq and its historical development process.

Research method: The method applied in this article is historical interpretation and in addition to historical texts, urban texture and context will also be interpreted to achieve this purpose. Regarding this matter, the cultivated areas adjacent to the city and areas far away from its urban texture have been identified and studied as examples of inhabited farmsteads and gardens to illustrate the relationship between them and the early urban core and also its secondary development.

Conclusion: The analysis of article's finding indicates that farmsteads in their micro-settlement pattern have provided utilizing water resources, planning to use lands for having a safe settlement and development, and expanding agricultural lands to reduce environmental hazards such as floods. On a larger scale, this pattern has continued to develop and has transformed the primary agricultural rural core into a secondary urban areas, and at the same time, it coincided with the urban development to the east, in accordance to the texture and shape of the farmsteads and gardens at eastern part of the original habitat or settlement.

Keywords: *Historic gardens, Inhabited Farmsteads, Naraq, Urban Development.*

* Corresponding author: +989123701084, a_omrani@kashanu.ac.ir

Introduction and problem statement

Naraq is a small town with a poor economy that is far from its prosperous days in the last century and before. The main cause of economic and commercial decline is usually attributed to the change of the route used to link the capital to Isfahan through Kashan into a new Delijan route in order to take the Narag off the main roads. However, the town still retains its agricultural and livestock production structure. The survival of these structure is due to the enriched context and the natural environment of the city that facilitates agricultural and gardening production. A great deal of these activities can be seen in an aerial photo of the year 1966 AD, where the fields and gardens are several times the size of the city (Fig. 1). The location of the farmlands and gardens of the town and the gradient of the area where Narag is located on, are in a way that these agricultural lands have not only a large impact on town's economy, but also play an important role in the urban landscape. However, despite the slight economic growth, both farmlands and gardens are at risk and the overall form of the town is changing. The decline in water resources along with the slow urban development toward agricultural lands have put this important part of the town at risk.

This development and deterioration make it difficult for us to perceive the relationship between the town and the mentioned areas, including farms and makes it challenging to understand the origin and development process of Narag. By *mazra'a* or inhabited farmstead we mean a humane habitat that is dependent on agricultural production systems and it is less populated than a village and has a historical background in the region (Fig. 2).¹ This article aims to understand the role of farmsteads and gardens in the urban structure of Narag and to hit this goal, the context, land preparation technics, and examples of historic farmsteads and gardens in comparison with the early urban core of Narag will be studied. The research method is historical interpretation and data collection is based on field and library studies together with oral history. Although historical

documents served as primary sources for this study, the limitation of evidence led us to interpret remnants of the ancient form of the town and its subdivisions as well. Particular attention has been paid to the survey of gardens and farmsteads and their role in urban spatial organization, through studying their natural context and historical background. Regarding that, the cultivated areas and inhabited farmsteads adjacent to the city and areas beyond its physical context, have been identified and studied to indicate the relationship between them with the urban core and its secondary development.

Research background

Although the formation of Narag and its relation to agricultural units around the city has not been the subject of independent research so far, but the relevance of farmsteads and historical gardens to the formation and development of cities in Iran has been the subject of quite a few researches. Riahi Moghaddam (2015, 56) has studied Mehriz as a city full of agricultural lands and gardens and also has investigated the integration of urban structure and its influential factors through history by studying gardens and Qanats. Water as a critical contributor to the formation and development of cities and their neighborhoods is one of the issues considered in Mehriz's analytical study (Ibid, 64). In another study on Meybod, the city has been investigated as a natural historical place located on a natural terrace in the Yazd-Ardakan plain. According to this research, the historic city of Meybod has been formed by 17 rural cores, all of which have been surrounded by Pomegranate gardens and all these elements gathering together defined the urban structure (Esfanjari, 2005, 8).²

The natural environment of Narag

Naraq is a foothill settlement in the central plateau of Iran and on the Delijan plain (Mojabi, 2005, 5). The mountains Ol, Valigā, Kāh and Gandom, Siāh and Zard-i Boland are located in the north, east, south, and southeast of the town (Javadi, 1998, 39)



Fig. 1. Aerial photo of the year 1966 comprising the lower and upper neighborhoods, Bazaar, the natural terrace on the north side of the town and south of the river; besides the East-West City Development Line. Source: Authors and Iran National Cartographic Center.

and the west side of it leads to the Delijan plain. The town lies at the foot of the mountains and due to the hillside slopes, the running water flows across the lands around it. One of the natural context features of the city that causes soil erosion is the permeability of surface waters arisen from the soil gradation.

Due to the natural and climatic features of the Naraq plain, the fine-grained sediments are transported from the mountain to the flat ground. These areas by supplying water have formed the most important spots for agricultural activity and population attraction in the region (Amoud, Consulting Engineer Co., 2016, 50).

• Historical background of Naraq

According to archaeological investigations, the historical record of parts of the town goes back to 12-15th centuries AD (Fazli, 2010), although settlement in the Naraq plain dates back to much older centuries. In 997 AD and under the title of the rastāqs of Qom, Hassan-i Qomi (1982, 72-73) mentions a fortress called Abel close to mount Bel, located near Naraq. The region's history is of great importance in the first centuries after Islam since it may refer to its pre-Islamic background. There are references to Dozdan and Sārūq fortress in Merāt al-Qāsān (Kalantar Zarrabi, 1999, 123); and also several fire temples in this area, including the Niasar fire temple in the southeast, the Borzu fire temple in the northwest of

Ardehal, and the Atashkooh and Nimvar fire temples in southwest of the region may prove it (Safari, 1963, 76-79). However, understanding the history of the formation of Naraq requires further study.

An aerial photo of the year 1966 AD demonstrates Naraq urban context contains a fine-grained area in the west and the westernmost part of the town, and a coarse-grained texture in the town extends to east (See Fig. 1). The center point of the mentioned fine-grained urban area appears to be the small town square near the Imam Hassan mosque or the mosque of the lower neighborhood or Mahaleh-yi Payīn. According to the registration documents in the national heritage list, the mentioned mosque dates back to the Safavid period (MCTH, 2000). In 2009 AD, 9 boreholes were dug in different parts of the historical context of the city. Among them, the only borehole having surviving remnants is believed to be related to the Imam Hassan mosque which includes glazed pottery of the 12th to 15th centuries AD, broken brick fragments and a stone foundation (Fazli, 2010). The archaeological findings are consistent with the limits of the fine-grained urban area and attribute the earliest evidence of settlement in this area to the pre-Safavid period.

Accordingly, the old Naraq, which has a significant association with the fine-grained urban area or the old neighborhood of the town, is located on a flatter surface than surrounding lands which is bounded from the south, by a series of lands on the hillside of mount Darre-ye Sīyāh and from the north lead to the edge of the large terrace which extends along the river (See Fig. 1). By developing the historic Bazaar on the terrace edge located on the north of the fine-grained urban area, the agricultural lands around the old urban core have been gradually expanded toward the east in the Qajar period, so, the upper neighborhood or Mahaleh-yi Bālā has been formed.

Water resources and arable land as key factors in formation and development of Naraq

For a long time, Naraq has been known for farmsteads

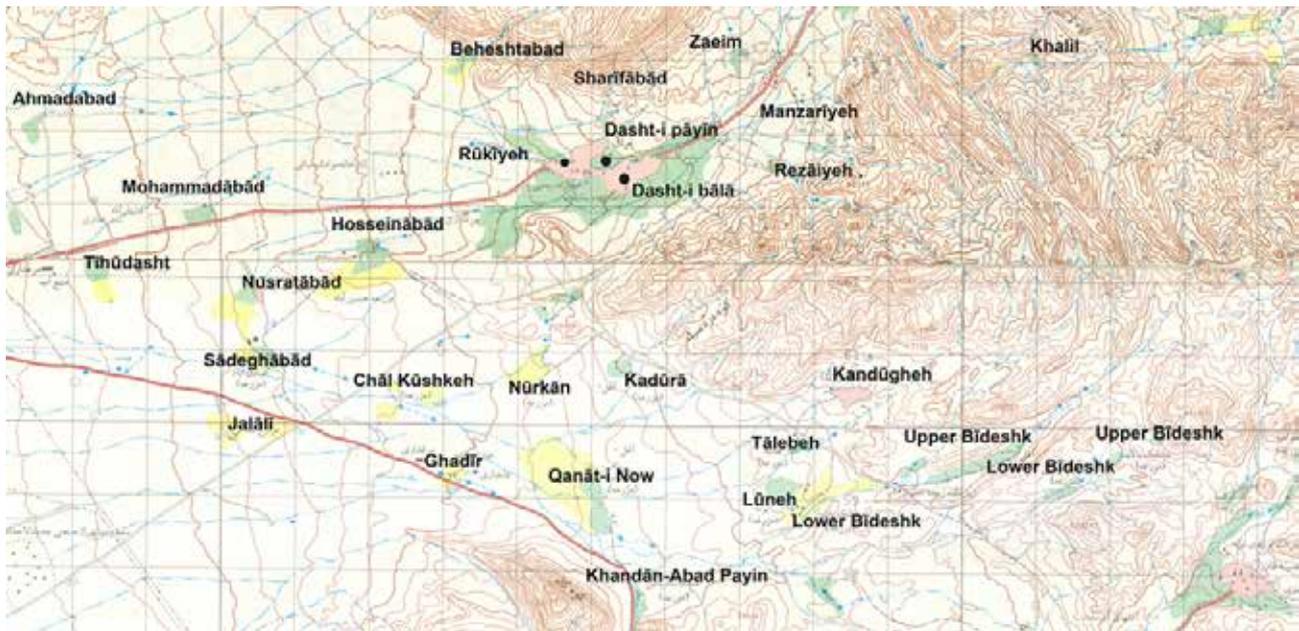


Fig. 2. The distribution map of farmsteads around Naraq. Source: Authors and Iran National Cartographic Center.

and gardens around it. In the first half of the 19th century AD, Haj Zayn al-Abidin-e Shirvani (1847, 573) has mentioned Naraq as a village and a well-known part of Kashan which surrounded by many gardens. He has also described the surrounding environment: the village is at the foothill of the mountain and its west side is so expanded. In 1892 AD Nasser al-Din Shah (1983, 28) on the way to Delijan writes: 2 miles away, Naraq was found on foothills and had many gardens. Despite being limited, historical references have indicated the role of the town's agricultural lands and its natural landscape in the past. Accordingly, the following three issues of water resources, agricultural zones, and farmsteads as the old agricultural and residential cores will be considered to understand their role in the formation of Naraq. A significant portion of the Qanat-dependent water supply network of the town has been destroyed, and studies in this section have been conducted based on sale and purchase agreements.

• Qanats and water resources

In the Naraq area, there are extensive underground aquifers and traditionally, Kariz and Well have used these water sources in the past. Soil drainage is

suitable in Naraq and despite the high groundwater level, surface water is well absorbed and directed to underground aquifers (Amoud, Consulting Engineer Co., 2016,87).

In addition to field studies, the sale and purchase agreements of water for farmsteads in Naraq also reveal the water local distribution system. For example, based on a document of the sale of water of Lāstān Qanat in Naraq, set in 1881 AD, all six sarechehs³ including twenty taghs⁴ of Qanat's water have been traded in the sixth tagh.⁵ Also in another agreement, set in 1344 AH (1926 AD), one of 1800 sarechehs of upper and lower qanat of Naraq was sold with its all belongings.⁶ Another agreement, set in 1340 AH (1922 AD), describes the sale of part of the agricultural water of the Lāstān farmstead.⁷

• The plains of Naraq

Naraq is formed in three districts called upper and lower and Rūkīyeh plains. The three mentioned plains have different characteristics that determine the style of agricultural activity in them. The main parts of the historic town are built on the upper plain or Dasht-i bālā located on the south side of the river. The north part located on the north side of the river along the whole of upper plain up to the bridge

built on the river by Iran Khānūm⁸ is considered as lower plain or Dasht-i pāyīn. The small part after the bridge to the west and on the same north side of the river is called Rūkīyeh plain (Aminian, 2018). These areas contain numerous farmsteads scattered across the plains with their subdivisions. For example, in a document set up for the sale of part of the Rūkīyeh lands in 1936 AD, a kandeh of Rukiyyeh plain has been mentioned: one kandeh belonged to Rūkīyeh estate which is known to kandeh-yi Shīralī has been sold.⁹ All these lands were fruit orchards that were formed based on the topographic features of the southern slopes of Mount Ol. A very few of the lower plain gardens remain and much of them have been dried up, but the structure of the land division and the horticultural system on the sloping plains in Naraq remain recognizable.

The historic core of Naraq is formed in the upper plain. Its western boundary is roughly tangential to the Pusūncheh and Malandān farmsteads in the western garden-alleys in the south and southeast of the mausoleum of Shah Soleiman (Ibid). The southern and eastern borders of the upper plain have been expanded to areas as far as agricultural conditions were existed.

The eastern half of the city, called the Mahale-Bala or Aulia, has a different texture from the more ancient core of the city in the west. The three plains mentioned have different land-use characteristics that determine the type of agricultural activity in them.

• Residential farmsteads

In the following, it is necessary to investigate the farmsteads that exist around Naraq. The examination of Fig. 2, as well as the interviews with with elderly master architects, make it clear that Naraq is located on a context covered by inhabited farmsteads such as Garniān, upper and lower Bīdeshk, Dar-i Chāleh Surkh, Kandūgheh, Manzarīyeh and Shamsābād (Khosravi, 1996, 47). The Naraq farmsteads is mentioned by Haj Zayn al-'Abedin-i Shirvani (1847) in the first half of the 19th century AD.

The other farmsteads are shown in Fig. 2 such as Kadura, Nurkan, Chal Kushkeh, Sadeghabad, Jalālī, Ghadir, Qanat-e Nou, Talebeh, Lūneh and Kavīr in the southern half of the town, upper and lower Khandān farmsteads on the foothills of mount Kāh; it also shows the farmsteads such as Agha, Shahzadeh, Pudana, Rezaiyeh, Manzarīyeh and Za'im in the western half of the town and Sharīfābād, Mohammadābād, Tihūdasht, Nusratābād, and Hosseinābād farmsteads in the north and east of the town. An important issue in some of these farmsteads is the presence of an element such as a castle and architectural remains related to dwelling. Therefore, at least some of these samples were inhabited farmsteads. Other examples of such farmsteads can be found in the other neighborhood geographical regions and other areas (Raei, 2016, 110-131; Mohammad Moradi, Salehi & Raei, 2016 5-6). The studied samples of inhabited farmsteads indicate the proximity of residential, service, and religious areas to agricultural lands and gardens (Ibid, 5-6). Although the main activities of these small communities were agriculture and animal husbandry, there was also a dense rural texture at the farmstead's core to maintain security and meet the other needs. The remaining examples are Kandūgheh and Mohammadābād farmsteads in the southern mountains of the town and on the Naraq route to Delijan (Fig. 3). Kandūgheh farmstead has an old castle. Its rectangular towers have living rooms and each tower belongs to one person and the farmstead does not have a single owner (Moradi, 2018); (See Fig. 3).

According to a sale agreement in 1918 AD, one of twenty-six taghs which belongs to Kandūgheh farmstead of Naraq with all of its belongings including fields, ditches, lands, fortresses, fences, gardens, towers and pools has been sold to Mullah Mohammad Ali Foroughi, the son of Mullah Mohammad-Ali Naraghi, the trader from the owner Ali Mohammad Naraghi.¹⁰ Also, in a similar example, set in 1900 AD, half part of the total acquisition of Chāl Kūshkeh farmstead in Naraq

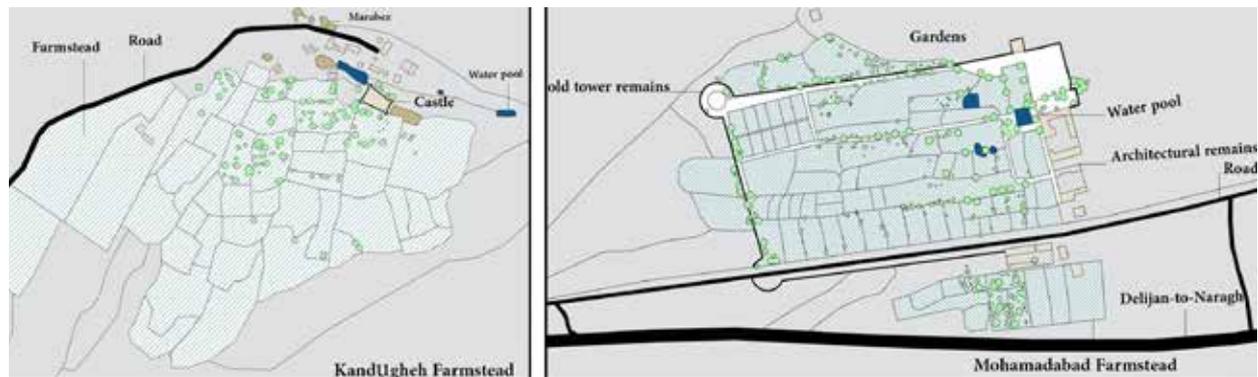


Fig. 3. The location of elements and spaces in two Mohammadābād and Kandūgheh farmsteads. Source: Authors.

including lands, gardens, fields and mountains, has been traded between two residents of the town.¹¹ The two mentioned documents explain the constituent elements of the farmsteads around Naraq were small villages formed due to favorable agricultural or livestock conditions and usually had a core or condensed physical pattern for permanent residence.

The investigation of two mentioned documents, as well as numerous examples based on a geographical map (See Fig. 2) and the aerial photo (See Fig. 1), show that the inhabited farmsteads of Naraq have at least three important features: First, one old settlement, commonly considered as a residential core (Fig. 4); second, agricultural lands around the mentioned core, which surveys and visual documents show they can be classified into two types of primary and secondary lands. The secondary lands have been arable in the past. This indicates that, depending on the water resources, the lands associated with each farmstead, and consequently the farmstead itself could be developed. The third feature indicates how the farmsteads were utilizing water resources. This illustrates the role of qanat as a landmark in each farmstead.

Investigating historical gardens of Naraq and their typology

Gardens are important elements in shaping the

urban landscape of Naraq, in addition to playing an important role in agricultural production. However, the role of gardens seems to be broader than shaping the urban landscape. In addition to fruit orchards around the urban fabric in the north, south, and west of the town, there are other examples of Gardens' presence in Naraq: first, the house gardens (khaneh bagh) which are characterized by some features that make them a type of house; the second, the larger enclosed gardens which are primary examples of formal gardens.

• Type one: north and south gardens and garden alleys

From the southern urban area of Naraq toward the south, a series of fruit orchards and garden alleys are visible. They are formed in combination with small fields of barley, clover, and wheat. These alleys have stone and adobe wall and they include a stream of water and also plane trees. The ownership of these gardens is private. For example, Pusūncheh garden belongs to Ahmad Khan Aminian, son of Mo'aven al-Mamalek (Aminian, 2018). The gardens are still alive because of the continued supply of water in the area. But in contrast, the water supply of fruit orchards in the north of the town has deteriorated and they have been dried up. The unique features of these gardens, including rock terraces on steep slopes where leading to the river and adobe wall with its stone foundations, are still observable. Despite the differences between the two mentioned areas, both zones are formed

by the combination of fruit orchards and garden alleys, thus the exterior areas of the urban texture are defined based on these characteristics. (Fig. 5).

• **Type two: house gardens**

Investigation of Naraq houses reveals that, along with formal houses with a central courtyard and vernacular or local samples, there is another type in which the main form is generally linear and facing a large, non-central courtyard. The courtyard of this kind of house gardens contains terraces which in terms of materials and construction technics, is reminiscent of terraced gardens in the sloping lands in the north and south of the town. Such homes appear to be related to the Naraq gardens that were previously studied. At the same time, the shape and some of the elements in their yard are remarkable as the dominant character of such gardens.

In this article, we shall briefly investigate two house gardens called Tabibzadeh and Mirza Ahmad Khan

Naraq (Fig. 6). In Tabibzadeh’s house, the building is lined to the north side of the courtyard, and inside of it has been built two stone terraces for tilting the land. The surface of these yards, unlike other types of houses, is covered with fruit trees and the planted area is not limited to just a few plots. The house is two-story and has a high ceiling, shāhneshīn room (main room) located opposite the courtyard.

All the openings are built in two floors towards the garden in triple combinations.

Another example is Mirza Ahmad Khan’s house in the southern urban area of the town and in the Mullakūiehā pass way. The open space pattern of this house, like the Tabibzadeh house, has terraces and is similar to the northern and southern gardens of the town. (See Fig. 6). This one is also a two-story house and has a high ceiling, above the adjacent rooms, called shāhneshīn room, with a precious decoration.



Fig. 4. The examples of historic farmsteads and villages of Naraq. Source: Google Earth.

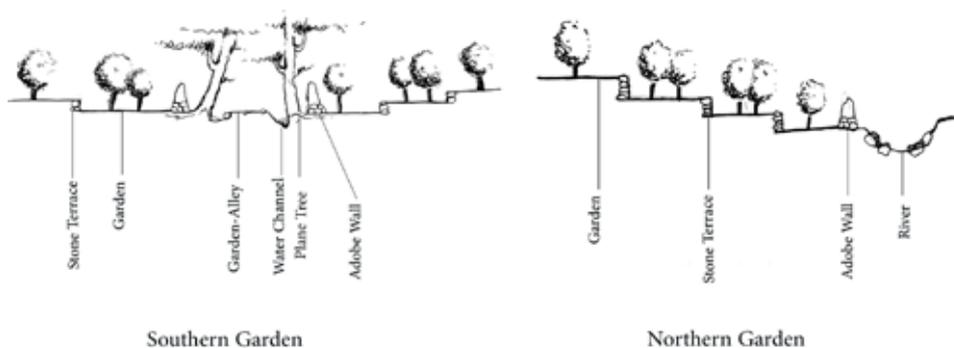


Fig. 5. The profile of the north and south gardens. Source: authors.



Fig. 6. Two examples of Naraq house gardens, Tabibzadeh house in the upper neighborhood path, and Ahmad Khan Naraqī’s house on the Mullakūiehā pass way. Source: authors.

• **Type three: formal gardens**

In addition to the mentioned types of gardens, there is also another type of garden in Naraq where at least two distinct samples of it, are recognizable. Such gardens were more organized compared to the other types, sometimes separated by mud walls or natural enclosures from adjoining agricultural lands; they included a building (mansion) too.

The terraces of these gardens were often along the entire system, but within the enclosure, a more regular arrangement was made based on the avenue passes through the garden, the sitting beds around it and the rivers pass by the garden.

- **Najmieh garden**

Najmiyah garden in the north of the river is an

example of fruit gardens with a spatial arrangement close to the formal gardens, includes a building and an avenue. This garden was owned by Iran Khānūm, wife of Reza Khan-i Aminian and now belongs to the Aminian family, a descendant of Mo‘aven Al-Mamalek (*ibid*). Due to its location, topography, and slope around it, the garden was not enclosed. It is located on the hill edge, and the terraces were constructed in harmony with the slope. In the Fig. 7, the layout of the terraces is drawn based on the situation of the year 1975 and the relationship between the terraces inside the garden with the surrounding ones is evident. The garden mansion has now been demolished, but the lines left from the terraces and the avenue, which are visible in the



Fig. 7. Najmieh garden in 1975. Source: authors.

aerial photo and the field survey, show the the land preparation techniques for building the gardens or farm lands.

- Baghaleh garden

On the southern margin of the town and where the pattern of agricultural lands is different from the northern half, there is another example of formal gardens. On the eastern side of the Chāleh Surkh farmstead, part of the agricultural terraces is enclosed by a adobe wall and four rampart, called Baghaleh garden, owned by Ahmad Khan, son of Mo'aven al-Mamalek (*ibid*).

The garden has physical elements and special spaces among the other Naraq gardens. The surface of the garden is a rectangle measuring approximately 120 by 65 meters and is divided into two parts: the northern half, consisting of terraces, stone water channels, an adobe wall, a building in the south and the main avenue of the garden; and the southern half includes four towers (ramparts) in the corners and an enclosed avenue. The building is located on the boundary of the northern and southern halves (*Fig. 8*). On the east and west sides of the enclosed avenue in the southern half of the garden, open spaces for keeping livestock have been built. Based on the architectural features and connection details of the towers to the adobe walls, it seems that the northern and southern halves of the garden were built in two

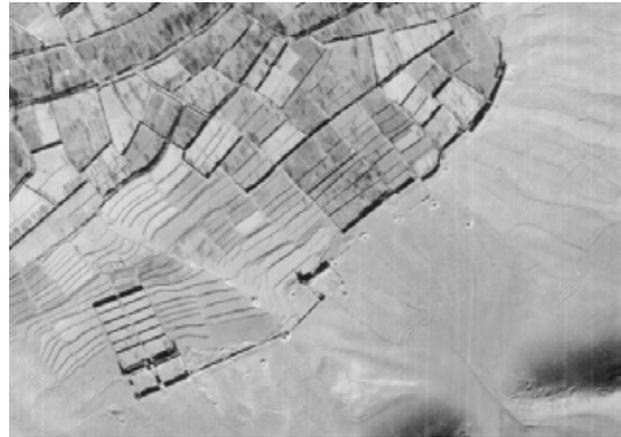


Fig. 8. The Aerial photo of Baghaleh garden in 1966. Source: Iran National Cartographic Center.

different periods, so the garden was developed after the early formation.

The stone water channels of the garden are the exceptional remaining historical samples in Naraq (*Fig. 9*). The sitting beds in a garden enclosed by an adobe wall are precisely along the terraces outside the garden. It shows that the tracing has a continuous and integrated system and the owner has enclosed part of his farmlands at a later time (*See Fig. 8*). The garden, therefore, is an enclosed part of the arable land whose formation has been subject to the conditions of the region.

A common feature of the historic gardens

In addition to the types that have been studied, Naraq gardens in their primary forms had four important common features. The forms or types examined in the previous paragraphs should be considered as the result of the features which will be discussed below. The first feature of gardens is their protection-based function. Limited urban growth due to the development of gardens especially in the south of Naraq makes it clear that the residential core of the town is in the best place to stay away from floods. The second feature is their development-based performance; the gardens alongside the agricultural lands have expanded for development on one side and sometimes confined to the other. At least

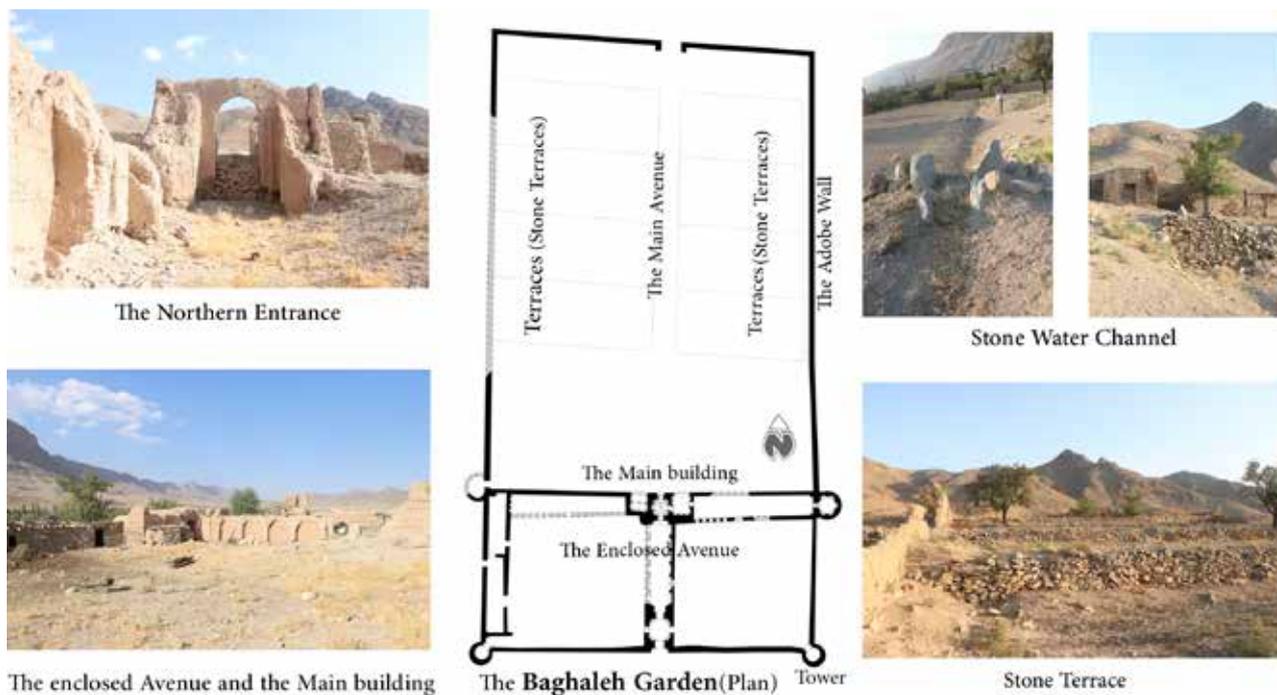


Fig. 9. The map of Baghaleh garden and its elements and spaces. Source: Survey and Drawing by Authors.

the reading and interpretation of the urban fabric represents the eastward development of town based on a pattern defined by gardens and agricultural lands that Later, parts of it form the upper part of town.

Besides, the type of house gardens should also be considered as the result of the relationship between architecture and urban development in fruit orchards. The third feature is the functional aspect of the gardens. The fourth feature is the gardens' wide influence on the urban landscape formation, so the gardens should be regarded as the main constituent elements of the urban landscape.

Discussion: The role of farms and gardens in urban structure of Naraq

Naraq is located in a valley surrounded by mountains and has landscapes with different slopes, so it has a variety of lands used in agriculture and gardening. One of these areas is the lands on the north side of the river and the southern slopes of Mount Ol that cannot be cultivated due to the high slope and have been used for orchards. The steep

slope of the area has led to the formation of terraced gardens. But the southern lands of the town have a milder slope. According to the aerial photo of 1966, large parts of the southern area used for agriculture. In this area fruit orchards have a lower percentage than farmlands.

All of the above areas are formed in a combination of natural features as its components and spatial organization supposed to be based on these features. Since agriculture has been one of the main pillars of Naraq's economy so far, with a good geographical context for its development around the city, the historic town is set among a series of farmlands, gardens and garden alleys. According to the aerial photo of 1966 and the distribution pattern of farmlands around the town, the expanded agricultural areas and gardens on the north, south and east sides of Naraq have formed a U-shaped area around it. In fact, on the three sides of mountains around the town, agricultural lands were also formed and developed on the foothills. One of the reasons for orchards and farmlands' dispersal patterns in the foothills has been the use and control of the running

water from the mountains. This has been one of the factors influencing the formation of the town and its relation to the arable lands.

Before studying this relation, we should briefly scrutinize the process of town formation and development. An aerial photograph of 1966 shows that the western part of the city has a fine-grained texture (See Fig. 1). The central core of the town seems to be the small square near the Imam Hassan Mosque in the lower neighborhood which dates back to the Safavieh era (MCTH, 2000). This interpretation of present statue of urban texture is compatible with the limited archaeological survey in 2009 and the cultural achievements taken from it (Fazli, 2010). At the same time, aerial photograph investigation in the southwestern part of the mentioned mosque reveals that sloping and terraced areas are dedicated to the farmlands. These steep slopes could also be a reason why the town developed from its early core around the Imam Hassan mosque to the east not to the west. The early core is a relatively flat area on the steep slope of the southeastern mountains of the town; the terraces in the southwest of the Imam Hassan mosque represent to make the distance between the early urban core and sloping fields. These terraces push the flood away from the early urban core. (See Fig. 1). Accordingly, Naraq is located on a surface flatter than the surrounding lands, bounded in the south by the slopes of mount Darre-ye Siyāh and limited in the north by a large and long natural terrace in the east-west direction, extending almost parallel to the river. Being located on this terrace minimizes the risk of flooding the city from the broaden heights on the north side of the river. Besides, it is important to note that the farmlands and gardens are located on the east, west, and south of the early urban core to provide an opportunity for both agricultural and gardening development, as well as to protect the early residential core against the dangers of surface runoff on higher areas. Therefore, the irrigation of these lands is also easier, compared to the absence of this locating, due to the location of water resources. These areas which formed based on the combination of the farmlands

and gardens have been gradually converted to the urban texture and have expanded to the east, leading to the formation of the upper neighborhood. Based on the socio-economic conditions, at least two types of houses have been built in this new neighborhood: the formal houses with a central courtyard and the house gardens (See Fig. 6); both types differ from the local ones in Naraq.

At the same time, the dispersal of house gardens both in the eastern part of the town and in the upper neighborhood indicates urban development among the orchards and gardens. Because some gardens have been converted to other types of a house due to the needs of the residents (See Fig. 6). Another important factor in urban development toward the east has been the formation of Bazaar and developing an commercial old road along the river, on the edge of the terrace located in the north part of the historic urban core. On the other hand, the undeveloped condition of Naraq 's early core to the west indicates that the sloping western margin was far from the commercial center and was not affected by the historical route. As a result, due to enough water and qanats' route, they remained as fruit orchards and farmlands.

Investigation of the urban structure of the historic area of Naraq indicates that in addition to having an antient core located around the Imam Hassan mosque, the town also has another historic core in the form of a Bazaar, which is considered as the heart of the commercial town. It seems that with the expansion of the town to the east, the Jami Mosque as the second most important religious center after the Imam Hassan Mosque, has been formed and next to it, Hosseiniye and water-tank (cistern) were later built. So, the town along with its role as a trade center in the north of the urban area has benefited from another historic core between the lower and upper neighborhoods' centers. It seems that alongside the Bazaar as a commercial center on a regional scale, the crossings between the two lower and upper local centers have formed local business part of the town (Fig. 10).

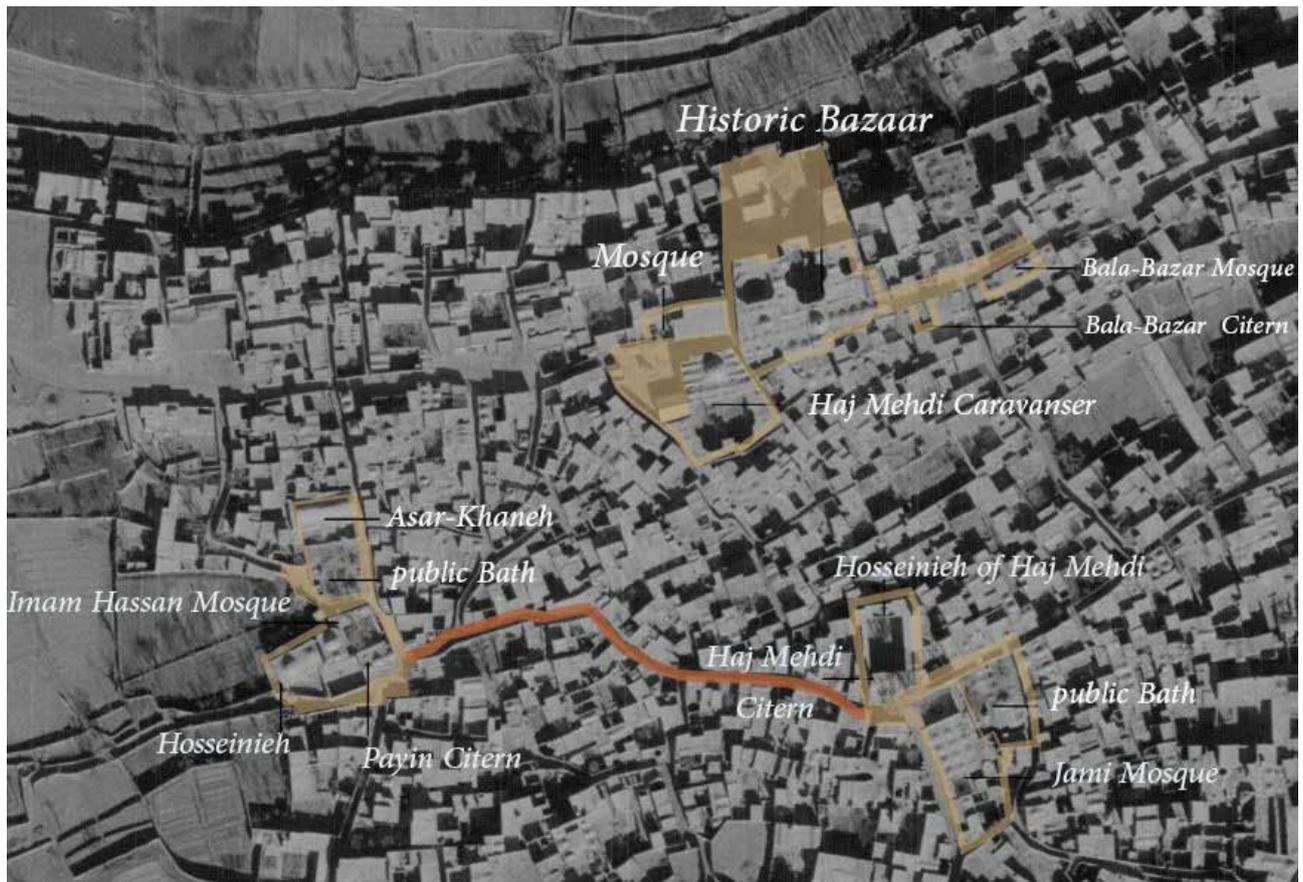


Fig. 10. The historical centers of Naraq consisting of:

1- A commercial and new city center (including Bazaar, Bala Bazaar Mosque, and Bazaar Cistern),

2- A historic area between centers of lower and upper neighborhoods containing the old center of the lower neighborhood (including the Imam Hassan Mosque, Hosseinieh, and Cistern) and the center of the upper neighborhood (including the Jami Mosque, Hosseinieh, and Cistern) as well as the main pass way connected the two mentioned centers, which also had a local business role. Source: authors.

Thus, before Naraq had a commercial core with a focus on the historic Bazaar of Shamsol-Saltaneh and also the more recent upper neighborhood, formed by urban development, it was an agricultural-based urban core; and this quality has always remained as a feature of the town. The importance of this has been to the extent that we can see the development of agricultural terraces, in all places where the field and water transfer are possible. Therefore, the early core of Naraq around the Imam Hassan mosque should be considered as an evolved form of a primitive residential farmstead that, according to topographical requirements, has expanded to the west in order to broaden the agricultural lands and has developed to the east to enable urban growth. However, other undeveloped inhabited farmsteads in the area indicate the importance of the lands on

the terrace, where the town is located and expanded on it. The terrace has always protected the primary and developed settlements from the north river floods. We must also take into consideration that it is protected from the dangers of floods coming from the southern mountains as the town moves away from the steep slopes connected to the southern mountains.

Conclusion

The historic city of Naraq was formed in a valley consisting of inhabited farmsteads (or *mazra'a*), including small settlements, farmland and gardens that grew or remained small in size, depending on the conditions.

The large examples of these fields, such as Kandak and Mohammadabad, and less developed areas such

as the Chalukushka and the upper Bidashk will still be identifiable in relation to the historic city (See Fig. 2).

The Inhabited farmsteads as early settlements have followed distinctive patterns based on utilizing the water resources and planning for land use to develop a secure establishment and to mitigate environmental hazards such as floods. This pattern has continued in the development of the town and its transformation from an early agricultural core to a rural and then an urban settlement. Investigation of the location of the Imam Hassan Mosque and its surroundings, the urban development on the east side of the town, and the location of the area around the mentioned mosque in the westernmost part of Naraq, describe the pattern of the urban formation and development.

The Naraq's primary settlement is a complex that is formed based on agriculture and related professions. Regional trade has given new position to this early urban core and with the formation and development of the Bazaar, Naraq has become a city with two centers: the first one is a historical center of the town, which is located around the Imam Hassan Mosque and served as the center of the agricultural urban core; the second center is located around the historic Bazaar. The reason for the formation of the new center is the development of the town towards regional communication. As a result of these changes, the Bazaar pass way in the north of the town has played a more important role and the new square has found its place along the Bazaar pass way. This is in accordance with the Bazaar position in people's minds before the decline of the town. Many elderly persons consider the Bazaar as a place dependent on the regional economy of Naraq; while the local trade of the historic urban area, has been kept for decades along the main pass way between the Masjed-Jame (the Great Mosque) and the Imam Hassan Mosque centers, along the lower and upper neighborhoods. However, in the last half-century, this axis has lost its commercial significance.

Another pattern of urban development in Naraq has been its eastward extension in accordance with context and shape of the farmlands and gardens. The dimensions of the land plots and the urban texture confirm this alteration; Moreover, the fragments of formal houses and house gardens also show a shift in urban texture from fine to coarse grain on the east side of the town. In addition, the southern and northern areas of the town, according to the original pattern of farmsteads and towns, have become places for the development of gardens and farmlands. Although this development has expanded terraced lands and provided agricultural growth, it has also led to the formation of some semi-formal gardens. The semi-formal title refers to the fact that although their outline is close to formal gardens, but the ultimate purpose of their construction has been farming and animal husbandry. From this point of view, Baghaleh and Najmīyeh Gardens should be considered as a secondary development in reconstructing of the historical farmsteads.

In contrast, the landscape within the gardens or the city has transformed to a landscape that the surrounding gardens' position relative to the North-South foothills will form its shape.

Endnote

1. See: Kalantar-i Zarrabi (1999, 131).
2. See also: Esfanjari (2007).
3. See: saricheh or pangān is an instrument to divide the water temporally. See: Dehkhoda, Moein & Shahidi, (1988) and Amid (1984).
4. A measurement unit for water.
5. The agreement set on 10th Muharram 1298 AH (13th Dec. 1880) (Ozaee, 2017).
6. The agreement set on 19th Zū al-Qa'dah 1344 AH (31st May 1926). (ibid).
7. The agreement set on 18th Rabī' al-Thānī 1340 AH (19th Dec 1921). (ibid).
8. The wife of Reza Khan Aminian one of the descendants of Mo'aven al-Mamalek the (Aminian, 2018).
9. The agreement set on 6th Zū al-Qa'dah 1355 AH (18th Jan 1937) (Ozaee, 2017).
10. The agreement set on 22th Rabī' al-Thānī 1336 AH (4th Feb 1918). (ibid)
11. The agreement set in 1318 AH (1918) on 21/06/2019 (ibid).

Reference list

- Amid, H. (1984). *Farhang-e Amid*. Tehran: Amir Kabir.
- Aminian, S. (2018). *Personal interview*. Naraq: The historic home of Ahmad Khan Aminian.

- Amoud, Consulting engineers. (2016). *Tarh-e Jame' Vizheh-yi Naraq* [Special Master Plan of naraq]. Tehran: Ministry of Roads and Urban Development (Unpublished report).
- Dekhoda, A. A., Moein, M. & Shahidi, J. (1998). *Loghatnameh*. Tehran: University of Tehran.
- Esfanjari, E. (2005). Motale-e va Pajuhesh-e memari-ye Masjid-e Jame Deh Now-e Meybod [Study on the Architecture of the jami Mosque of Deh Now in Meybod]. *Athar*, 26 (38-39), 3-53.
- Esfanjari, E. (2007). *The old structure of the historical city of Meybod*. In E. Esfanjari (Ed.), *Meybos, the city that exists*. Meybod: Meybod Research Center.
- Fazli, Q. (2010). *Gamaneh Zani dar Shahr-e Naraq* [Archaeological investigation in Naraq]. Arak: Cultural Heritage of Markazi Province (Unpublished report).
- Hosseini, S.F. (2018). *Personal interview*. Naraq: Naraq Municipality.
- Javadi, G. (1998). *Delijan dar Ayiney-yi Iran* [Delijan in the Mirror of Iran]. Mashhad: Astan Qods-i Razavi.
- Kalantar Zarrabi, A. (1999). *Merat al-Qasan* [History of Kashan], Iraj Afshar [Ed.]. Tehran: Amir Kabir.
- Khosravi, M. R. (1996). *Naraq dar aeein-ye tarikh* [Naraq in the Mirror of History]. Tehran: Afrinch Cultural Institute.
- Mohammad Moradi, A., Salehi Kakhaki, A. & Raei, H. (2017). An Inception on the Perception of the Inhabiting Farmsteads in Yazd. *Researches in Islamic Architecture*, 4(4), 1-21.
- Mojabi, S. M. (2005). *Tarh-i Rahbordi-yi Baft-i Tarikhi-ye-i Naraq* [Strategic plan of the historical context of Naraq]. Naraq: The municipality of naraq (Unpublished report).
- Moradi, M. (2018). *Personal interview*. Naraq: Moradi's Private Home.
- Naser Al-din shah. (1983). *Safarnameh-ye 'Eraq-e 'Ajam: belad-e markazi-ye Iran*. Tehran: Tirejeh.
- Ozaee, H. (2017). *Ghabal-ye forosh-e ab-e ghanavat-e oliya va sofla-ye naragh dar 95 sal ghabl* [Deed of sale of water in the upper and lower canals of Naraq]. Retrieved from <https://salahshorannaragh.blog.ir>.
- Qomi, H. (1982). *Tarikh-i Qom* [History of Qom], Jalal Al-din Tehrani [Ed.]. Tehran: Toos.
- Raei, H. (1395). Dar jostejoo-ye mazare-e maskon-e arbabi-ye dore-ye ghajar dar niyasar [In search of Manorial Residential Farms of Qajar Dynasty in Niasar]. *Studies on Kashan*, (8), 110-131.
- Riahi Moghaddam, S. (2015). Mehriz: Yesterday's borough, Today's garden city. *Housing and Rural Environment*, 34 (151), 55-66.
- Safari, H. (1963). *Tarikh va Farhang Delijan* [History and Culture of Delijan]. Tehran: Balkh.
- The Ministry of Cultural Heritage, Tourism and Handicrafts-(MCTH). (2000). *The registration documents of the Imam Hassan Mosque in the national heritage list under no. 3534*.
- University of Kashan. (2018). *Tarrahi-ye shahri-ye khyaban-e emam khomeyni-ye naragh* [Urban Design of Imam Khomeini Street in Naraq]. Markazi Province: Department of Road and

COPYRIGHTS

Copyright for this article is retained by the author(s), with publication rights granted to the Bagh-e Nazar Journal. This is an open-access article distributed under the terms and conditions of the Creative Commons Attribution License (<https://creativecommons.org/licenses/by/4.0/>).



HOW TO CITE THIS ARTICLE

Omranipour, A., Jayhani, J. & Rajabi, F. (2020). The Role of Farmsteads and Gardens in the Formation and Development of The Historic Town of Naraq. *Bagh-e Nazar*, 17(86), 5-18.

DOI: 10.22034/bagh.2020.171199.3987

URL: http://www.bagh-sj.com/article_102589_en.html

