

Physical Comparison and Review of the Caravansaries of Isfahan Golpayegan with a Focus on Jelogir Caravanserai

Elham Saadate Lolaki^{a*}, Dariush Heidary^b

^a *M.Sc. Student of Conservaton and Restoration, Yazd Branch, Islamic Azad University, Yazd, Iran*

^b *Assistant Professor of Conservation and Restoration, Yazd Branch, Islamic Azad University, Yazd, Iran*

Received 23 January 2018; revised 25 May 2018; accepted 17 July 2018

Abstract

Since ancient times, attention has been given to Human's need for shelter. Building caravansaries has a long history in Iran. Nowadays, you can see valuable buildings, which have been forgotten because of living and commercial changes around the roads of Iran. Conserving the social-cultural heritage of caravansaries (between cities and inns) can provide us with modern equipment and facilities built on the basis of traditional structures. Moreover, it is considered valuable heritage in attracting Iranian and foreign tourists. Jelogir caravansary is among the precious buildings of the Safavid period. It is located 14 kilometers to Khundab (village belonging to Dehq-Najafabad). Jelogir caravansary has been built in Shah Sultan Hussein's period. While it is of great importance and has special features, no conservation initiative has been taken. Because of the increasing damages and lack of care, it is predicted that only the ruins of the structure exist.

This research aims to introduce Jelogir caravansary architectural and embellishment features. An attempt is made to answer questions about the role of this caravansary in planning and building other caravansaries in the west of Isfahan, located in the route of Golpayegan. To achieve the goals, historical-descriptive and analytic research methods were used. Moreover, by conducting field and desk research, we provided an appropriate course for recognizing and answering the above mentioned questions.

Keywords: West of Isfahan; Country Caravansaries; Safavid Dynasty; Jelogir Caravansaries

* Corresponding author. Tel: +98-9133173493.

E-mail address: elham.lolaki@yahoo.com.

1. Introduction

In Iran attention has been given for building caravansaries. Factors such as development of commercial and pilgrimage roads and geographical and political positions have been among the most prominent causes for expansion of such structures.

Iranian caravansaries have different styles of architecture and building according to the climatic conditions. The 4-porch, 2-porch, octagonal round, mountain and Persian Gulf Coast maps were used for building country caravansaries. In Safavid period, the following items caused the flourish of this region: the importance of roads, Raahdari (an organization in Iran which is responsible for road maintenance), the related facilities and assigning Isfahan as the capital of Iran. Because of the mentioned reasons, many caravansaries were built in this region at that time. In addition to depicting the economical, commercial and connective importance of this region, the caravansaries hold remarkable architectural features (Hasani, 2012).

The old Arabestan, region in Isfahan, has always been the focus of attentions in different periods. In the description of courses of Isfahan, Siro said even in the pre-Achaemenid period, the merchants traveled in these courses. Jelogir caravansary is one of the valuable buildings in this region. It has been built in Shah Sultan Hussein's period.

The four-porch method has been used in building Jelogir caravansary. It is about 3700 square meters in area. It is registered as one of the national monuments of Iran in 2003, with the national monument number 9047. This building is considered as a unique roadside caravansary in Isfahan. Although it is far away from the main road, the location is based on the historical period of its time for general safety. Due to the changes in planning such as transportation and commercial system, the Jelogir caravansary has become dull and forgotten.

Moreover, this building is exposed to the following serious damages:

- Damages caused by humans such as digging deep holes, shooting walls and actions done by people looking for treasure.
- Natural damages
- Erosion (humidity, wind, old material, etc.)

The amount of the damage is increasing and if the necessary conservation and protection are not done, by the passage of time, this building will be ruined.

In this paper, initially a brief explanation about caravansaries, in general, and about Jelogir caravansary has been provided through examining its vicinity context. Afterwards, the historical, structural and architectural aspects of this building will be discussed by relying on the gained knowledge. Finally, some steps that can be taken toward conserving and restoring this building and preventing it from destruction will be introduced. In some studies, Jelogir caravansary is compared with other contemporary-neighboring buildings which will also be dealt with in this paper.

2. Literature Review

Many studies have been done on caravansaries of Iran. This study has pointed out some of them; Pirnia (1991 & 1993) in a chapter briefly talks about buildings dependent on roads and adds other researchers' opinions. Siro (1949) introduces the ancient roads of Iran, buildings dependent on such roads, and somehow presents typologies of Iranian caravansaries. Moreover, Siro offers instances for each type of the caravansaries. Kiyani (1994) introduces the names and briefly explains the architectural detail and history of the Iranian caravansaries. Hadizadeh Kakhaki (2010) reviews the types of caravansaries, their histories and their physical architectural structure.

Shanavaz and Khaghani (2015) offer the history of caravansaries, their reviews in different historical periods of Iran- especially in the Safavid period; and finally review the physical architecture and functions of Iranian caravansaries in Safavid's period. After reviewing the above mentioned sources, it was clear that only Siro and Bitá mentioned the Jelogir caravansary. This rectangular-shaped caravansary of the Safavid period has private rooms for people to relax; an important factor which has been forgotten since the Seljuq period. From the inside of the caravansary, the proportion of the entrance has been well structured. This building was especially for the high-level official travels. The construction date of this building has been engraved on a stone. Very little research has been done on this Jelogir caravansary till date.

3. Methodology

The study has a historical and descriptive analysis method. This methodology is based on field survey and library documentation. The field survey included taking photos, measuring the structure and interviewing the rural residents. The library research includes comprehensive information, written sources and historical pictures.

4. History and Location of Jelogir Caravansary

The foundation of caravansaries was established during the Achaemenid dynasty in Iran. The Shahi road was among the most important roads built in the Achaemenid period. There are 20 caravansaries from Lidi to Ferbji (Girshman, 1965: 158). In the Parthian period and in coincidence with the presence of Iran in world commercial center, much attention was given to build caravansaries and other building facilities, some of which have remained since that period. Most of the discoveries include carvings and inscriptions. Consequently, these remains of the structure need preservation and improving the road situations (Pirnia & Karamatallah, 1991: 91).

In the Sassanian period, growth in economy and construction of many caravansaries took place along the commercial roads. In this period, it is most likely that the buildings were simple and not much difference between the structures (Siro, 1949: 88-92). With the advent of Islam, drastic changes took place in building caravansaries in a way that a huge portion of Iranian architecture was devoted to the foundation of caravansaries (Monzavi, 1982: 163).

Undoubtedly, the golden age of building caravansaries in Iran belongs to the Safavid period. The prosperity of domestic and foreign commerce and also paying due attention to the pilgrimage cities and roads were among the major reasons for new changes in architecture of caravansaries and their embellishments. Tourism travelling to Iran in the Safavid period had recorded interesting descriptions and drawings of the caravansaries and described those buildings as modern hotels (Kiani & Delfaram, 1983: 3).

Jelogir caravansary was built in the Safavid period. It is a roadside structure with four Ivans (porches) located 14 kilometers to Khundab (a part of Dehaq, a district of Najafabad) and 13 kilometers to Dor (Dor is a village of Golpayegan, a district of Isfahan).

This building is called "*Madarshah*" by Maxim Siro. According to Siro, from ancient times to the Safavid period, people crossed the Tor village and travelled from Isfahan to Borujerd and Golpayegan. However, in the past century, one has seen fewer travelers. This road is on highway number 24 of Tehran which starts from a village called Gaz and a place called Anushiravan. It is still the shortest route between Isfahan and Golpayegan. The next stop is the caravansary of Hosnījeh; which belongs to the Safavid period, famous for its tall entrance structure; there is also another road which connects the Tor village. The nearest village to Dehaq is located in high and

sharp altitudes; from where one climbs the Tor pass. There is a flat area which is surrounded by mountain walls. This is an ideal place for settlement which is also close to the station.



Fig 1 Caravanserai location in the village and surrounding villages (source: www.google.com/maps)



Fig 2 Caravanserai (source: www.google.com/maps)

There exists the great Madarshah caravansary and a Mongolian castle. Also, an old Mongolian dam exists near the pass; the water of this dam was used for this flat area. From this place one can reach “Shureh Chah” and “Tikal”. There is a highway after Tikan which leads to Borujerd (Siro & Bita, 1947: 16-18).



Fig 3 and 4 Caravanserai view from roadside (source: Authors)

5. Geographical importance of Jelogir Caravanserai during the Past Years

From the Achaemenid period to the invasion of Arabs to Iran, Isfahan plain was playing an important role in policy, economy and business of Iran. After the invasion of Arabs, this city became an arena for gathering the conquerors. ‘There is a valley, always called Arabestan, which directly leads to Golpayegan’ (Siro, 1949: 7). The presence of Arabs was one of the reasons for which this place was called Arabestan. When the Safavid dynasty took power, they declared Shia as the formal religion of Iran, started commercial relationships with the world, eliminated the Iranian relationship with the Osmani Emperor and made a society in which many caravansaries were built. During that period, Isfahan was the capital city of Iran. Shah Abbas built a well-equipped road to connect Isfahan to the west of Iran (i.e., Khosravi). This road was a branch of the Silk Road. The remains of such caravansaries can be seen in Hosnijeh, Damaab, Dor, Tikan and Chaleh Siah, used by caravans to pass these cities (Momeni, 2009: 52; Kalantari, 2001: 33).

According to what was mentioned so far and in view of the remaining buildings, which belong to different historical periods including Atabaki castle, Dor, Hosnijeh caravanserai and Chaparkhaneh of Chaleh Siah, it is obvious that this region was one of the important areas in Iran and many merchants and caravans passed through this region. Therefore, many buildings such as Jelogir caravanserai were built there.

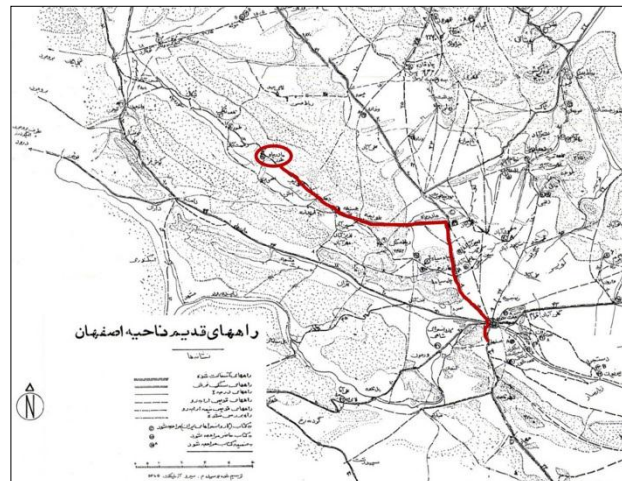


Fig 5 Old route of Isfahan area; caravan route from Isfahan to Golpayegan and the location of the caravanserai (source: Siro & Bitá, 1947)

5.1. The History of Jelogir Caravanserai

In the past, the Isfahan-Golpayegan route from Tor village was used by caravans. Therefore, a lot of caravansaries can be seen on this route. After the Khundab village toward Golpayegan, it is the Jelogir strait. This strait is one kilometer to the north-west of the Jelogir caravansary. After the Safavid period, some bandits and rebels took these caravansaries as a base and pillaged the caravans passing by. That is why this caravansary is called Jelogir. According to the local people, this building has been called Jelogir for about three centuries.

According to Maxim Siro's observations, the boulder mounted on the covered walls of the building dates back from 1694 to 1722 (Siro & Bitá, 1947: 291), of which nothing of the boulders remained.

5.2. The Architectural Structure of Jelogir Caravansary

The entrance building has two floors. It extends 3.8 meters from the general outline with stone trusses on both sides. The wooden entrance door of caravansary is missing and the only remaining one is the stone door frame. This frame has been embellished with delicate stone pots on the plinth. The portal of Jelogir caravansary is a roof which leans against two big piers with light weight shelves. The extra load is avoided by using chamfered parts (Siro & Bitá, 1947: 294). It is important to mention that like many other caravansaries, there are some openings (or cavities) above the portal of the building called Sorbafkan. This acts as a defensive part which has been used for pouring boiling water, oil, lead or any hot fluids on the enemies when the caravansary was in a state of siege (Hadizadeh Kakhaki, 2010: 107). The general outline of the caravansary is higher than the surrounding floor. It is decorated with a portal, five bulkheads and a plinth made of Tishehi stone which is 90 centimeters in height. There are brick meshes on the outside walls of the

caravansary; most of the parts have been ruined. Due to the lack of an eight-sided shape and its construction with the roof, it is impossible to see the dormant part with the main building of the house.

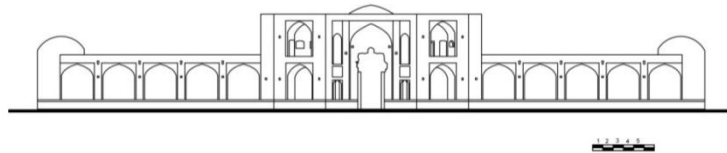


Fig 6 and 7 Elevation and the Entrance doorway (source: Authors)

There are two circular plan towers at the corners of the entrance facade. After the entrance, we get to the vestibule with a circular roof and beautiful brickwork. Indeed, the vestibule connects the entrance to the courtyard, which is in front of the southern Ivan (porch). There are two rooms on the west and east of the vestibule. The roof is accessed through the two staircases built in the vestibule area. This also holds two small rooms connected to each other at the top of the entrance. These rooms were used by the soldiers and had a view of outside areas of the caravansary as well the space of the vestibule (Siro, 1949: 286).

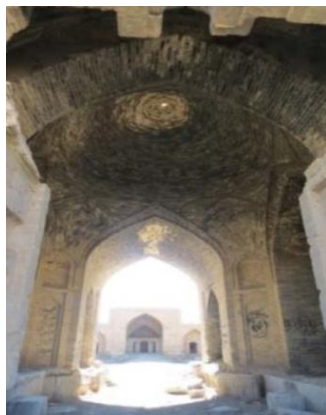


Fig 8 and 9 Destructive way between the two sides above the vestibule (source: Authors).

Image 9: Vestibule space (source: Authors)

The central courtyard of Jelogir caravansary has a near square or rectangle shape measuring about 38.5 m 31 meters. The chamfered stable entrances on four corners of this caravansary are made for convenient entry of animals. The courtyard walls have cavities built of stone bars called Akhie used for fastening stocks.

This caravansary has four important Ivans built at the center of each corner. The porches are built higher than the other parts to make them distinguishable. Unlike the western and eastern Ivans (porches) having Grehchini bricks, the other two Ivans are simple with walls decorated with shelves. The western and eastern Ivans are symmetrical; each has two shelves and one fireplace on

the sides. Moreover, each of these Ivans has three shelves on the opposite side. Their roofs are in a rhythmic type. All the Ivans are decorated with four bulkheads which are symmetric and each two of them are placed opposite each other.

The southern Ivan is a two-story one located in front of the entrance Ivan. The first floor has two pentagonal parts, one fireplace and two shelves. This main private space, also called *Shahneshin* in Persian, was used by high ranking officials for resting and holding discussions.

The southern doorway connects the western and eastern spaces via a bridge which is on the three hatches of the downstairs. The eastern side space has an opening through which the outside can be observed. It is likely that the front hall was used for ceremonies. Men watched the ceremonies from upstairs and women from downstairs.

There are chambers on the four sides of the courtyard, which is accessed through a small Ivan measuring 2.8m x 40cm. The Ivan is higher than the floor of the courtyard. The chambers measuring 3 x 2.8m were used for accommodating guests. These chambers are built all around the northern and southern Ivans, which include two groups each with three rooms. Also, the western and eastern sides, which are symmetric, hold one Ivan and two groups of rooms (each with two rooms). They are on both sides of the Ivan. The floor and small Ivan are 40 cm higher than the level of the present yard.

There exist two chambers, which are larger than other chambers, on both sides of the western and eastern Ivan. Each of these chambers has four shelves and one fireplace. Their roofs are of *Ahang*. The rest of the chambers hold two shelves and one fireplace; moreover, their roofs are of *Chehar Tork*.

The stables of Jelogir caravansary completely surround the chambers and *Sahn* (i.e. the inside space of a covered building). The stables of this building are divided into seven sections; to have an easy access, entrances have been built in the chamfered corners of the central courtyard. It seems that the southern stables were private and were used by high ranking officials and prominent figures. Basically, the stables were designed in a way that they served as a buffer between the outer space and the guest room which overlooked the central courtyard. In the stable bulkhead, platforms were built from stones, which were used by porters and cameleers to take a rest and unload their freight. There were stone *Akhiehs* which were used for fastening the stocks and now they are ruined.

There are some *Hourns* in the roof. They provide ventilation and light for the stable. In four sections of the stables, four toilets were built for passengers.

One important point which makes Jelogir caravansary distinguishable from other roadside caravansaries is the construction of two private courts in two corners of the courtyard. The Jelogir caravansary has a small octagonal courtyard with two Ivans, three chambers and a guard station on the south eastern corner. This part acts as the private area of the caravansary. In this small courtyard and around its narrow area, kitchen and toilet have been built.

There is another yard in the south western corner, which is smaller and of less importance compared to the later one. These two yards are symmetric. The second yard corridor is more covered. This keeps the strangers away from having a good sight within the yard. This section holds two rooms and a hall which is illuminated through a small rectangular yard. At the end of this yard, there is a pentagonal Ivan; one end of this yard connects to the kitchen and the other to the toilet (Siro & Bitá, 1947: 286). The private yard can be accessed from within the right and left stables. The entrances to these spaces have been built in the form of a maze passage, preventing the strangers from peeping inside when they were at the doorway. Sometimes, for security reasons these route were built more complex (Sultanzadeh, 2011: 184).

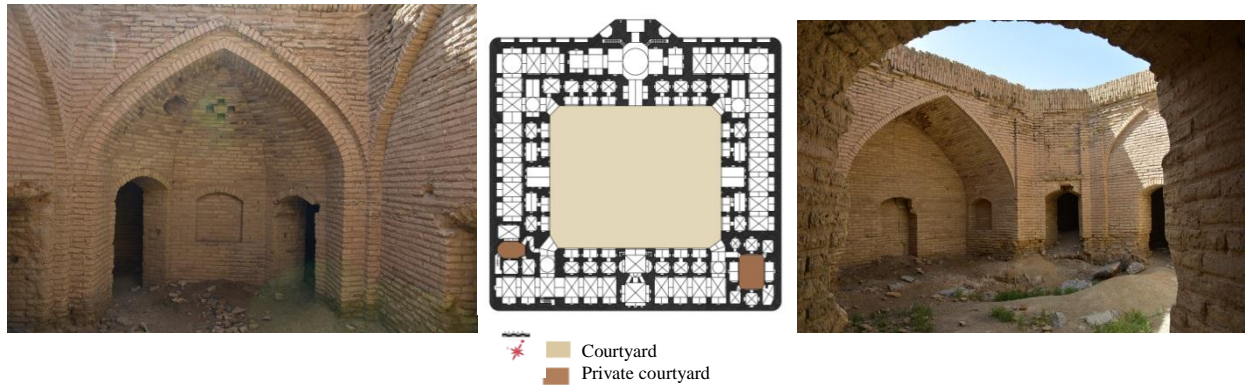


Fig 10 and 11 Private courtyard of the Jolgir caravanserai (source: Authors)

Perhaps, these two small yards were used by women. This idea seems to be logical because of the following reasons: first, the caravansary was built along the pilgrimage route; second, according to Siro, it was considered as a royal caravansary and the queen (who according to history was so powerful) had settled there at least once. Chaleh Siah caravansary or Sheikh Alikhan caravansary is another instance of the caravansaries, the courts of which are in the corner of the yard, and will be referred to for comparison.

6. Comparing Jelogir Caravansary with the Neighboring Contemporary Caravansaries

The study compares the plans and architectural structures of other caravansaries whose geographical positions are the same as those of Jelogir caravansary. The study compares Jelogir caravansary with other three caravansaries built in the Safavid period which are Chaleh Siah or Sheikh Alikhan, Madarshah of Murcheh Khort and Tor respectively.

Chaleh Siah caravansary bears many similarities with Jelogir caravansary, which dates back to Shah Suleiman's period. The Madarshah, which was a royal caravansary, was built in the Safavid period, which dates back to Qajar period. Tor caravansary is located 13 kilometers away from Jelogir caravansary; it was built in the Shah Tahmasp I period and was restored in the Shah Suleiman's period.

6.1. Chaleh Siah or Sheikh Alikhan Caravansary

Chaleh Siah caravansary is located 45 kilometers northwest of Esfahan in the village Jihad-abad. Caravanserai of Sheikh Ali Khan has an area of 6700 square meters, with a square dimension of 82 by 82 meters. The entrance is on the left side with 12 bulkheads on both sides. There are platforms, rooms with two smaller upper floors, used by the guards, with some space allocated for passengers with services such as groceries and food. The hall has two octagonal small yards near the corners of the building. The large internal yard has four chamfered corners measuring 38 by 50m with Ivan's style (Ganjineh Asar, 1971: 646).

There are two halls behind the northern Ivan at the building entrance. The front hall has a double-story rectangular shape which is connected to the behind hall through three doorways. The entrance of the stables is located behind the chambers, within the four chamfered corners of the

yard. The drinking water of the caravansary is supplied by a subterranean canal. The structure embellishment is in brickwork which is comparable with some old houses of Julfa in Isfahan; the characteristic belongs to the late of the Safavid period (Ahmadi, 2006).

Two stone tiles are on top of the door of this caravanserai. One engraved with Nastaliq inscription depicting the completion date and time of the building. The other tile is placed on top left side with poems written in Nastaliq inscription. According to the inscription, the document engraved is by Taher, son of Reza Esfahani (Honarfor, 1971: 648).

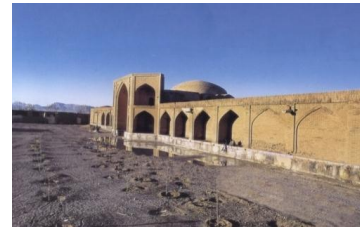
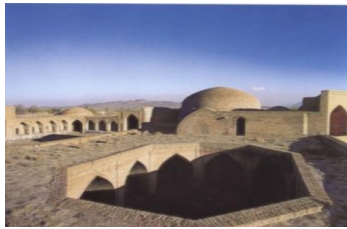


Fig 12 and 13 Entrance of the Caravanserai and corner view from the Sheikh Ali Khan courtyard (source: Hajighasemi, 2005: 20)

This caravanserai has striking similarities to Jelogir caravansary. Both caravanserai entrances project out of the wall. Moreover, in each entrance doorway, a beautiful stone frame surrounds the wooden doors. The main façade of the Madarshah caravansary, in which there is a central building, is almost like the one of Chalehsiah. The structures used at the entrance of the buildings are the same (Siro & Bitá, 1947: 286). There exist chambers, where services such as bakery and grocery were offered, on both entrance sides of these caravansaries. The Chalehsiah caravanserai has a central hall, with chamfered corners at the entrances of stables, private courtyards and a porch hall opposite the entrance. Such features have also been observed in Jelogir caravanserai. The materials used in both of the caravansaries are brick, adobe and stone. As mentioned earlier, the inscription of Sheikh Ali Khan caravanserai dates back to the Safavid period. It is likely that Jelogir caravanserai is contemporary with Sheikh Ali Khan caravanserai since they are quite similar and date back to the same period. In addition, Siro believes that the architecture of both caravansaries was carried out by same person (Siro & Bitá, 1947: 286).



Fig 14 Entrance of the Sheikh Ali Khan caravanserai (source: Safari, 2013).

Fig 15 Entrance of the Jelogir caravanserai (source: Entekhabi, 2016)



Fig 16 At the entrance of Sheikh Ali Khan caravanserai (source: Safari, 2013).



Fig 17 At the entrance of Jelogir caravanserai (source: Authors, 2013)



Fig 18 Backside stone at the entrance of the caravanserai (source: Safari, 2013)

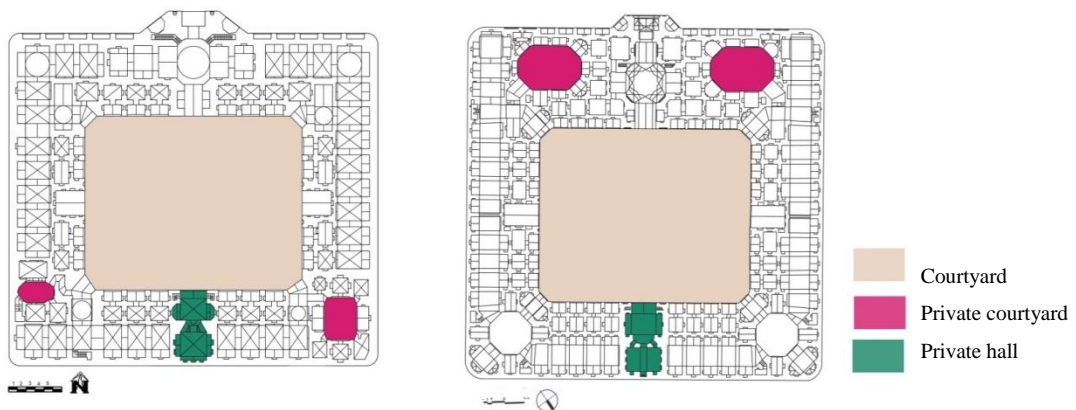


Fig 19 Sheikh Ali Khan and Jelogir caravanserai plan with courtyard, private courtyards and private hall (source: Authors/ Hajighasemi, 2005, 17)

6.2. Madarshah Caravanserai of Moorchehkhort

Madarshah caravanserai of Moorchehkhort is located in Borkhar o Meimeh town in Isfahan. It is located on the right side of Esfahan and Tehran highway (Hasani Baferani, 2012).

An inscription is placed at the portal of this caravanserai which dates back to the Mohammad Shah Qajar period-1251A.H (Honarfar, 1971: 863). According to Maxim Siro, the caravanserai welcomed the king and foreign ambassadors visiting Esfahan (Siro & Bitá, 1947: 276). In view of the skills implemented to build this caravanserai, Siro believes it was built by the best architects during the Shah Abbas II period or King Solomon ordered by Shah Abbas mother (1052-1077 A.H) (Siro, 1949: 149).



Fig 20 Madarshah caravanserai (source: Authors, 2016)

The caravanserai has an area of 6678.45 square meters. There is a large rectangular courtyard in the middle of this caravanserai. Further, it holds four Ivans in the middle of its sides and some small Ivans between these four Ivans. Chambers are built behind these small Ivans. The arches of the small Ivans, which are around the courtyard, are the same. The main Ivan is on the northern side of the dome roof. There are two staircases around it to access the roof. This caravansary has two types of stables: 1) some has pillars with square bases; built in the corners of courtyard. The entry to this area is through the chamfered corners of the courtyard. This space is covered by roof, it is decorated and it has been used by private stables. 2) The other stables are long like corridors covered with roof, located behind the south eastern and north western chamber of the courtyard (Siro & Bitá, 1947: 276).

The entrance of the caravanserai to the south and south west includes portal and hashti (vestibule). The portal, hashti and back Ivan are connected directly. Hashti is a space with Hasht o Nim Hasht base. The height is two meters covered with a dome. The sides of the vestibule consist of two spaces covered with a dome. The space was used by soldiers or the security guards of the caravanserai. There exist four circular towers at the four corners of the caravanserai used for security purposes. The materials used include stone and brick. The interior and exterior façade of the building has been built in brickwork. Bathrooms and water reservoirs were built outside the caravanserai on the west side, which are also accessed from the inside of the caravanserai (Siro, 1949: 148).

There are some similarities between this caravanserai and Jelogir caravanserai. For instance, their entrances are projected outward of the buildings; there are also chamfered and similar bulkheads. Moreover, the paths to access to the courtyard are similar in each caravanserai; at first, one needs to cross the hashti and then reach the Ivan. Both caravansaries have an equal number of chambers. The access to the roof is through the staircase in the vestibule (i.e. Hashti).

However, the major differences between these two caravanserais are the stables and the way to access them. The linear form of the stables of Madarshah caravanserai surrounds the caravanserai.

Moreover, the stables of this building have square forms in the corners. The structure is symmetrical in all directions. Another difference is the number of their towers.



Fig 21 Entrance to the Jelogir caravanserai (Source: Authors, 2017)

Fig 22 Entrance to the Moorchehkhurt caravanserai (Source: Authors, 2016)

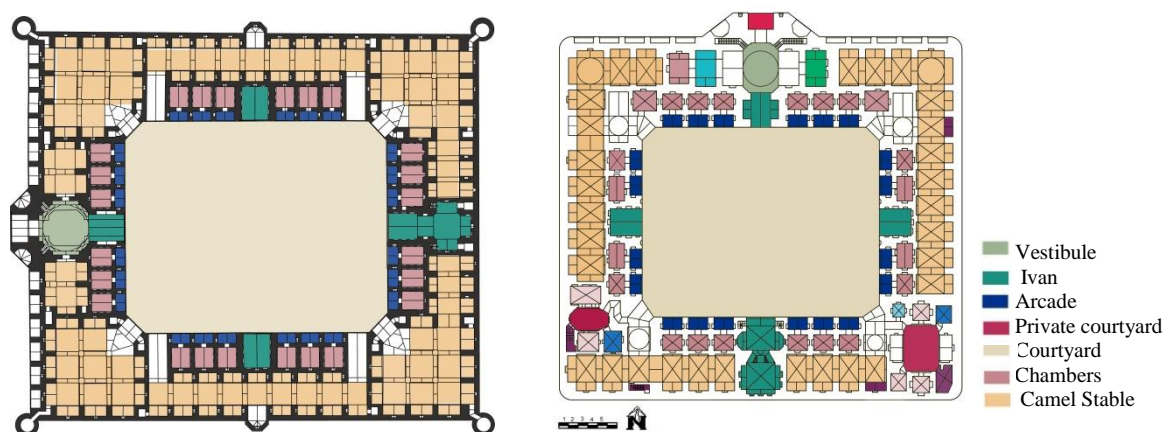


Fig 23 Comparison of spaces on plan of the Jelogir and Madarshah of Moochehkhurt caravanserais (source: Authors / Hajighasemi, 2005: 30)

6.3. Tor Caravanserai

Tor caravanserai is located 50 kilometers to the east of Golpayegan. It is in the old road of Isfahan-Golpayegan and in a village called Tor. This building was built in the Safavid period. It has a central courtyard, twelve chambers and stables. It was built in the Shah Tahmasp I period (930-948 A.H) and later its façade and portal were restored in the Shah Suleiman period (1077-1105 A.H).

The portal form of this caravanserai is different from the portals of other caravansaries built in this region. This difference is mostly because of the restoration. The building measures 55.55 by 47.5 m and was built by brick, stone and cement. This caravanserai has a big courtyard and the northern Ivan includes the building depth. The Ivan measures 4.66 by 12.22 meters with five fireplaces. In front of the two halls, there exist two other Ivans. The Ivan measures 4.55 by 5.6 meters.

Tor caravanserai has four L-form stables, and each of these stables has one entrance. The corridor, after the entrance, has two vestibules; the first one is covered with a convex small dome. This vestibule is connected to two corridors from both sides. Each of these corridors has two hatches longitudinally.



Fig 25 Entrance of the Jelogir caravanserai (source: Authors, 2017).

Fig 24 Entrance doorway (source: Authors, 2016)

There were two toilets near the northern solid towers. According to the portal, this building dates back to the time of Shah Suleiman (Siro & Bitá, 1947: 195).

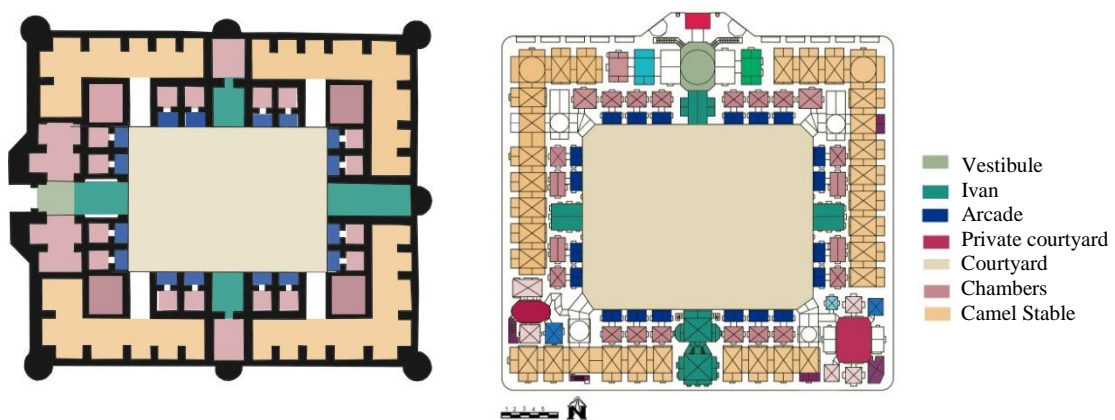


Fig 26 Tor caravanserai plan (source: Authors)

This building was registered as a national monument in 2005, with the national monument number 12236. This building is located 13 km to Jelogir caravanserai. The Tor caravanserai's height differs from the height of Jelogir caravanserai. The way to access the stables is another difference between these two caravansaries.

In addition, Tor caravanserai has four decorated solid towers and three half towers amide its sides. However, Jelogir caravanserai has just two towers. Generally, Tor caravanserai differs from Jelogir caravanserai; the differences lie in the towers, the height of the entrance, the Ivan, the number of the chambers, the access to the stables and the exterior façade. The plan and pattern of Tor caravanserai is simple. A common aspect that exists in the two caravansaries is the general features of four-Ivan caravansaries.

7. Conclusion

According to what has been mentioned, attention was paid to the roads and facilities in the Safavid period. This was because of the communication development, commercial prosperity and economic growth. In that era, many buildings and caravansaries were built in the middle of some roads. Among these buildings, Jelogir caravanserai, which Siro et al call 'Royal Caravanserai', has an special importance because of its geographic location. Because of the changes in the present living patterns, this building has been isolated. However, it can be revived by assigning new facilities based on today needs.

In the route of the Jelogir caravansary to the western exit of Isfahan, there exist many other caravansaries, which show the importance of this caravanserai. Since this route was used by pilgrims and other caravans, it was necessary to build such caravansaries and other buildings. However, based on the comparisons, it can be concluded that Jelogir caravanserai is more complete than any other caravansaries; the presence of private courtyards, the toilets and a main hall proves this claim.

Generally, the form and the usages of Jelogir caravanserai are designed according to a roadside caravanserai. This means that the building holds a systematic square plan and is composed of sections such as vestibule, entrance, central courtyard, four main Ivans, some chambers which surround the building, a main hall and finally some stables which have been placed behind the chambers. The features that draw our attention is that Jelogir caravanserai has two private courtyards with different sections. This feature does not exist in any other caravansaries except Chaleh Siah caravanserai.

Of course, it must be pointed out that the Chaleh Siah building has two private similar courtyards. There exist a kitchen and a toilet in these two sections. Based on the available evidence, Jelogir building dates back to the Shah Sultan of the Safavid dynasty. The evidence includes a striking similarity between this building and Chehel Siah building which dates back to Shah Suleiman of the Safavid period. It is probable that Jelogir and Chaleh Siah caravansaries had the same architect since there is a remarkable similarity and they are built in the same period.

References

- Grishman, R. (1965). *Iran from beginning to Islam*. (M. Moein. Trans.). Tehran: Translation and Publishing Company.
- Hadizade Kakhaki, S. (2010). *Caravanserai in Iran*. Tehran: Office of Cultural Research.
- Hasani Bafrani, N. (2012). *Gaz Caravanserai Restoration Plan* (Master's thesis). Isfahan art University, Isfahan, Iran.
- Honarfar, L. (1971). *Treasures of historical Works of Isfahan*. Isfahan: Saghafi Publisher.
- Kalantari Dehaghi, R. (2001). *Dehagh (village of ancient times) Isfahan*. Naghshe mana Publisher.
- Kiyani, M. Y. & Delfaram, K. (1983). *Inventory of Iranian Caravanserai*. Ministry of Culture and Higher Education, Iran National Heritage Preservation Organization.
- Kiyani, M. Y. (1994). *Caravansaries of Iran*. Tehran: Cultural Heritage Organization of Iran.
- Momeni, M. (2009). *Review on arts and the villages of Mehrdasht district*. Tehran, Dibaye Publisher.
- Monzavi, A. (1982). *Ritual writing*. (A. Altaghasi, Trans.). First Edition, Tehran, Kolfan Company.
- Pirnia, M., & Karamatallah, A. (1991). *Road and Fortress*. Cultural Heritage Organization of Iran, Armin Publisher.
- Pirnia, M. (1993). *Introduction to Islamic Architecture of Iran*. Editor of Gholam HosseinMemarian. Tehran, Sorosh Danesh Publisher.

- Shanvaz, B. & Khaghani, R. (2015). *Caravansaries of Iran*. Tehran, Pazhineh Publisher.
- Siro, M. & Bitá. (1947). *Ancient routes of Isfahan region*. (M. Mashayekhi. Trans.). Iran National Heritage Preservation Organization.
- Siro, M. (1949). *Caravansaries of Iran and small buildings in-between routes*. (E. Behnam. Trans.). Iran National Heritage Preservation Organization.
- Soltanzadeh, H. (2011). *Entrance spaces in traditional Iranian architecture*. Tehran, Office of Cultural Research.
- Benevolo, L. (1977). *History of modern architecture* (Vol. 2). MIT Press.
- Campbell, J. (2015). *The German Werkbund: The Politics of Reform in the Applied Arts*. Princeton University Press.
- Daniels, M. (2013). Paris National and International Exhibitions from 1798 to 1900: A Finding-List of British Library Holdings, 1-49.
- Feizi Azarshahr, S., Motamadny, A., & Basiri, M. (2013). New Technologies in Modern Architecture and its Interaction with Traditional Architecture. *Research Journal of Chemical and Environmental Sciences*, 1(3), 70-80.
- Fischer, M., & Kunz, J. (2004). The Scope and Role of Information Technology in Construction. In *Proceedings-Japan Society of Civil Engineers* (pp. 1-32). DOTOKU GAKKAI.
- Geppert, A. C., Coffey, G., & Lau, T. (2006). *International Exhibitions, Expositions Universelles and World's Fairs, 1851-2005: A Bibliography*. Freie Universität Berlin, Germany.
- Gyetzvai-Balogh, Á. (2007). *Architecture of the 19th century and the Turn of the century*. Budapest University of Technology and Economics. Retrieved from <http://www.eptort.bme.hu>.
- Guedes, P. (2010). *Iron in building, 1750-1855: Innovation and cultural resistance* (Doctoral dissertation). The University of Queensland, Australia.
- Hart, P. T., Huisman, K. J., Kort, P. M., & Plasmans, J. E. (2006). Investment in Hightech Industries. An example from the LCD industry.
- Justiniano, N. (2011). *Pop Art: past, present, and future*. NM, 344.
- Käs, H., & Konrad, B. (2016). *Experience the variety. BMW Welt, Museum and Group Plant*. Retrieved from BMW Welt: bmw-welt.com.
- Kastner, W., Neugschwandtner, G., Soucek, S., & Newman, M. H. (2005). Communication Systems for Building Automation and Control. *Proceedings of the IEEE*, 93, 1178-1203.
- Klassen, F. (2004). Material innovations: transparent, lightweight, malleable and responsive. In *Transportable Environments 2004, Proceedings of the 3rd International Conference on Portable Architecture & Design*, April (pp. 28-30).
- Merin, G. (2013). *AD Classics: The Crystal Palace/Joseph Paxton*. Retrieved from <http://www.archdaily.com>.
- Martin, C., & Leurent, H. (2017). Technology and Innovation for the Future of Production: Accelerating Value Creation. World Economic Forum, Geneva Switzerland.
- Mihaila, M., & Banica, C. (2014). New Perspectives in Automotive Industry Architecture: Car Museum Design. *Prostor*, 22(2), 302-313.
- Morris, S. (2010). *Exhibition of modern museum architecture at the BMW Museum*. Retrieved from [bmwusanews: www.press.bmwgroup.com](http://bmwusanews.com).
- Nagashima, K. (1995). Global Approach toward Architecture of the Future. In *XX UIA Beijing Congress*, Japan.
- Perez, A. (2010). *AD Classics: Centre Georges Pompidou/Richard Rogers + Renzo Piano Building Workshop*. Retrieved from [archdaily: http://www.archdaily.com/64028/ad-classics-centre-georges-pompidou-renzo-piano-richard-rogers](http://www.archdaily.com/64028/ad-classics-centre-georges-pompidou-renzo-piano-richard-rogers).
- Pollock, G., & Zemans, J. (Eds). (2007). *Museum after modernism: strategies of engagement*. John Wiley & Son.
- Raji, M. A. (2013). Architecture and Emerging Cities: The Impact of Technological Change in Building Material A Study of Minna, Nigeria. *Arts and Design Studies*, 7, 19-49.

- Schoenefeldt, H. (2008). The Crystal Palace, environmentally considered. *Architectural Research Quarterly*, 12(3-4), 283 -294.
- Sklair, L. (2005). The Transnational Capitalist Class and Contemporary Architecture in Globalizing Cities. *International Journal of Urban and Regional Research*, 29(3), 485–500.
- Savio, A. M. (2006). *Tradition and Modernity in Modern Architecture as Exemplified in some of the works of Walter Gropius, Le Corbusier and Mies Van Der Rohe*. International Basic Studies in the Humanities. Denmark: Roskilde University.
- Talor, J. C. (1927). *Futurism*. The Museum of Modern Art: distributed by Doubleday, Garden City, New York.
- Venturi, R. (1977). *Complexity and Contradiction in Architecture* (Vol. 1). The Museum of modern art, New York.
- Vinnitskaya, I. (2012). *MyZeil Shopping Mall/Studio Fuksas*. Retrieved from <https://www.archdaily.com/243128/myzeil-shopping-mall-studio-fuksas>.
- Witcomb, A. (2007). ‘A Place for All of Us’. Museums and Communities. *Museums and their communities*, 133-156.