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COMPARISON OF ANATOLIAN AND PERSIAN CARAVANSERAIS IN THE SELJUK PERIOD

Nastaran DELJAVAN* Kerim ÇINAR**

Abstract

According to history, the caravanserais were situated along the Silk Road, which linked the East and West and played a significant role in cultural exchange and trade between cities. Caravanserais were constructed to provide facility services and shelter for travellers. The construction of caravanserais in Iran is data back to the Sassanid period. The design of caravanserais alongside the road during the Seljuk Empire was a policy of the Seljuk Empire to connect cities located within the empire's borders. Hence, different caravanserais with various designs were constructed in both Anatolia and Iran. This study emphasizes caravanserais constructed during the Seljuk era in both regions.

The aim of this paper is to compare the architectural characteristic of Persian and Anatolian caravanserais built during the Seljuk era. In this respect, six caravanserais with different typologies of the plan features from both regions were selected to compare. The selected caravanserais from Iran are Deyre Gachin, Robat-e Mahi, and Robat-e Sharaf whereas Evdir Han, Aksaray Sultan Han, and Alara Han are selected from Anatolia.

The comparison of these caravanserais includes several steps. In the first step, the characteristics of Seljuk caravanserais were defined. In the second step, the features of each caravanserai in terms of its construction or restoration date were explained. In the third step, the form and function of each caravanserai were discussed. In the last step, the similarities and differences between the caravanserais of Iran and Anatolia were identified. To conclude, according to our study, interior spaces and the function of caravanserais in both regions are largely similar, whereas the plan design and space organization are different.

Keywords: Seljuk Period, Persian Caravanserais, Anatolian Caravanserais.

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Selçuklu Dönemi Anadolu ve İran Kervansaraylarının Karşılaştırılması

Öz

Tarihe göre kervansaraylar, Doğu ve Batı'yı birbirine bağlayan İpek Yolu boyunca yer almış olup şehirler arasındaki kültürel alışveriş ve ticarette önemli bir rol oynamıştır. Kervansaraylar, yolcular için konaklama hizmetleri amacıyla yapılmıştır. İran'da kervansarayların yapımı, Sasani dönemine kadar uzanmaktadır. Selçuklu İmparatorluğu'nun imparatorluk sınırları içinde yer alan şehirleri birbirine bağlama politikası olarak kervansaraylar yol boyunca tasarlanmıştır. Bu nedenle hem Anadolu'da hem de İran'da çeşitli tasarımlara sahip farklı kervansarayların yapıldığı bilinmektedir.

Bu çalışmanın amacı, Selçuklu döneminde inşa edilen İran ve Anadolu kervansaraylarının mimari özelliklerini karşılaştırmaktır. Bu bağlamda, her iki bölgeden farklı plan tipolojilerine sahip altı kervansaray karşılaştırılmak üzere seçilmiştir. İran'dan seçilen kervansaraylar Deyre Gachin, Robat-e Mahi ve Robat-e Sharaf iken, Anadolu'dan Evdir Han, Aksaray Sultan Han ve Alara Han seçilmiştir.

Bu kervansarayların karşılaştırılması dört aşamada yapılmıştır. İlk aşamada Selçuklu kervansaraylarının özellikleri tanımlanmıştır. İkinci aşamada, her bir kervansarayın inşa veya restorasyon tarihi açısından özellikleri açıklanmıştır. Üçüncü aşamada, her bir kervansarayın formu ve işlevi tartışılmıştır. Son aşamada ise İran ve Anadolu kervansarayları arasındaki benzerlik ve farklılıklar incelenmiştir. Bu çalışmanın sonucuna göre, her iki bölgedeki kervansarayların iç mekanları ve işlevlerinin büyük ölçüde birbirine benzer olduğu, plan tasarımı ve mekân organizasyonlarının ise birbirinden farklı olduğu belirlenmiştir.

Anahtar Kelimeler: Selçuklu Dönemi, Pers Kervansarayları, Anadolu Kervansarayları.

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Introduction

Seljuk Empire governed 3.9 million square kilometers, which required the establishment of safe roads linking the cities within their border. In this respect, Caravanserais were constructed along these roads to control not only their territory but also ensure the security of traveling merchants. This run to the construction of different caravanserais in countries such as Iran, Turkey, Iraq, Uzbekistan, Turkmenistan, Syria, and Afghanistan, each with their own separate designs.

According to Yavuz (1976, p. 81), after mosques, the caravanserais were the second most important type of building in the Seljuk architectural heritage. The primary aim of caravanserais was to offer shelter for travelers, however, these buildings also had other significant functions such as serving as religious sites, royal guest houses, military outposts, and prisons. Furthermore, caravanserais were used as statehouses when Sultan and his army were traveling between two cities. Yavuz (1976, p. 82) also explains that most Persian caravanserais were designed symmetrically on two axes with the courtyard. In contrast, there are scarce caravanserais in Anatolia, which were designed with symmetry, according to her.

With the exception of Evdir Han, the remaining few Anatolian caravanserais were constructed with a symmetrical layout on just one axis. Andaroodi, Andres, and Lebigre (2005, p. 6) state that during the early Seljuk period and prior, the fundamental idea behind Persian caravanserais were centered around a courtyard featuring 2 or 4 Iwans, with rooms located around it. Additionally, most caravanserais feature four round towers in the outer corners of a square layout. Andaroodi, *et.al* (2005, p. 3) explain that Seljuk caravanserais in Iran are recognizable by type of vault, brick work and arch, which are employed in the buildings. According to Andaroodi, *et.al* (2005, p. 3), the majority of Seljuk caravanserais were built using a combination of rubble stone and brick.

Despite Persian caravansaries, which follow the same concept, Anatolian caravanserais follow different concepts. Yavuz (1976, p. 82-83) classified caravanserais into four main types. These four types are:

• Closed Space Planned Caravanserais: The caravanserais belonging to these types are characterized by their enclosed spaces without courtyards. Typically, their floor plans take on a rectangular shape, similar to that of Şarapsa Khan.

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 - Closed Space and Courtyard Planned Caravanserais: This type of caravanserai features both enclosed spaces and courtyards. The distinguishing characteristic of this type is that the enclosed spaces were constructed first, and the courtyards were added later when economic conditions improved. Aksaray Sultan Han is the best example of this type of caravanserai in Anatolia.
 - Courtyard Planned Caravanserais: This type of caravanserai features a square plan with a courtyard surrounded by rooms. The design of this type is reminiscent of Persian caravanserais built during the early Seljuk period and prior to the Islamic period in Iran. The plan of this type is symmetric in nature.
 - Concentric Planned Caravanserais: This type of caravanserai was considered the most sophisticated type of caravanserais constructed in Anatolia. This design can be utilized in various geographical locations without taking into account climatic conditions. This type of caravanserai was originally developed in the Anatolian region. The design of Concentric Planned Caravanserais utilizes concentric rectangles, each with a specific function.

This study focuses on six caravanserais belonging to the Seljuk Empire, as shown in Figure 1. Three of these caravanserais, namely Alara Han, Aksaray Sultan Han, and Evdir Han are situated in Turkey, while the other three, Deyre Gachin caravanserai, Robat-e Mahi, Robat-e Sharaf, are located in Iran. All of these caravanserais are situated outside of cities along the routes that connected important cities of the Seljuk Empire. The following lines provide detailed explanations of each of the aforementioned caravanserais.

Alara Han (see Figure 1, top right)

Tükel (1969, p. 461) explain that Alara Han as a Seljuk Han is situated on the road connecting Konya to Alanya. Yavuz (1969, p. 466) notes that Lloyd-Rice and Erdmann drew the measured plan of Alara Han. The caravanserai has a rectangular shape with concentric planning, with the largest rectangle measuring 37.80 X 49.90. The inner covered rectangle serves as the courtyard, and its entrance is located on the axis of the portal. The rooms with Iwans are arranged alongside the narrow courtyard. The external space of concentric plans belongs to animals. According to Tükel

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(1969, p. 469), the building was constructed by cut rectangular stones, rubble stones and masonry.

Aksaray Sultan Han (see Figure 1, middle right)

Durukan (2007, p.141-159) notes that the location of Sultan Han is on the Konya-Aksaray road, 94 km from Konya and 40 km away from Aksaray, at a distance of 4 km from the main road. Sultan Han was constructed in 1229 A.D. in Seljuk period as the second largest caravanserai in Anatolia. The building had several restorations in various periods, the first restoration dates back to the Ottoman period. Sultan Han's plan comprises two rectangular forms, one of which is covered, while the other has a courtyard with rooms surrounding it. The covered part as a shelter serves animals and humans. The mosque, toilet, bathroom, and other service areas are located within the courtyard section. The building was constructed with various types of stones for example the facades were covered by cut stone whereas the walls were filled with rubble stone (Durukan, 2007, p. 141-159).

Evdir Han (see Figure 1, bottom right)

Eravşar (2007, p. 419) explains that Evdir Han is located 18 km northwest of Antalya on the Antalya-Burdur road. Since Antalya became part of the Seljuk lands in 1216 A.D., it can be inferred that Evdir Han was built no later than 1216. According to Eravşar (2007, p. 423) and Yavuz (1976, p. 82), the caravanserai was designed in a square plan with four Iwans leading to a wide central, similar to Persian caravanserais like Robat-e Mahi. The plan exhibits symmetry on two axes, and 4 Iwan were designed on the sides of a square plan on two axes. According to Eravşar (2007, p. 427), the courtyard of Evdir Han was enclosed by two rows of Riwaqs on all four sides, and the rooms were located behind the Riwaqs. The construction of Evdir Han involved the use of various stones of different sizes, including large stones for the foundation.

Deyre Gachin Caravanserai (see Figure 1, top left)

According to Shokoohy's (1983, p. 446) explanation, Deyre Gachin is located along the route connecting Ray and Qom. The plan of Deyre Gachin is a square shape with a central courtyard consisting of 4 Iwans on the axes of a square. The four towers were situated at each corner,

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and two additional towers were located on either side of the main entrance. Shokoohy (1983, p. 453) interprets that the semi-elliptical towers in the plan and elliptical domes above all towers found at Deyre Gachin are indications that it was built during the Sasanian era. Additionally, the fired red bricks with gypsum mortar (measuring 36 X 36 X 8 cm) used in curtain walls and towers of caravanserai date back to the Sasanian era. The type of bricks used in the construction of battlements indicates that this caravanserai was restored during the Seljuk period. Some evidence shows that further restorations were carried out during the Safavid and Qajar periods.

Robat-e Mahi (see Figure 1, middle left)

Korn (2018, p. 4) says that Robat-e Mahi is located on the road, which connects Nishapur to Marv, and it is two days journey far from Tus. Korn (2018, p. 4) states that Wolfram Kleiss drew a ground plan of the caravanserai as a sketch for the first time. According to Korn (2018, p. 5), Robat-e Mahi was constructed in the early 11th century in the Seljuk period with bricks. This caravanserai had a square plan with a central courtyard measuring 41.20 X 36.40 m. The rooms with small Iwans were arranged around the courtyard, and four large Iwans were situated on the two axes of the square plan.

Robat-e Sharaf (see Figure 1, bottom left)

Korn (2018, p. 4) says that Robat-e Sharaf is situated on the backbone road connecting Nishapur to Marv. This caravanserai was built during the Seljuk period as a royal caravanserai, serving both ordinary travelers and the Seljuk royal family. It underwent several restorations, with the first one dating back to the 12th century. The royal caravanserai was utilized from the 10th to the 16th century. According to Emami, Sarbazzadeh, Abedi, and Candy (2022, p. 6), the Robat-e Sharaf caravanserai is composed of two courtyards, each with four Iwans on the axes and rooms arranged around them. The large square courtyard, measuring 31.8 X 31.3 m, served the public as a caravanserai, while the small rectangular courtyard, measuring 32.4 X 16.5 m, was reserved for the Sultan. Robat-e Sharaf was constructed with bricks similar to Robat-e Mahi. Both of them have the same decoration with brick patterns (Korn, 2018, p. 6).

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Figure 1: Selected caravanserais from Iran and Anatolia

Research Method

The aim of this research is to compare the architectural features and spaces of Persian and Anatolian caravanserais that were built during the Seljuk period. The study selected six significant Seljuk caravanserais with different plan typologies from Iran and Anatolia to be compared for their similarities and differences. This study excluded the closed space planned type of Anatolian caravanserais.

The research followed two steps after selecting the caravanserais. Firstly, the plans of the caravanserais were drawn to scale according to available images in the literature. Secondly, nine parameters of architectural features were compared in each caravanserai plan to define their differences and similarities. These parameters consist of the symmetricity of axes, the proportion of closed, open, and semi-closed spaces, the size of courtyards, the combination of spaces dedicated to

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humans and/or animals, the presence of Iwan, the presence of Riwaq, the location of the portal, and finally the location of the mosque and kings' flat.

Results and Discussion

The results of the comparison are indicated in Figure 2 to Figure 7, where the top plans present the Anatolian caravanserais, and the bottom plans present the Persian caravanserais. In these figures, the differences and similarities of selected caravanserais in terms of their architectural characteristic were presented.

The comparison of the plans of selected caravanserais exposed differences in the size of courtyards, the combination of spaces dedicated to humans and/or animals, and the proportion of closed, open, and semiclosed spaces. Additionally, the presence of the Iwan, portal, Riwaq, mosque, and royal family flat differ among these caravanserais.

As represented in Figure 2, in Persian caravanserais, the plan and courtyard form are square, whereas in Anatolian caravanserais it is rectangular. Additionally, there are not any symmetric either horizontally or vertically in Anatolian caravanserais, except for Evdir Han, while there are symmetric in both directions in Persian caravanserais. The square shape plan with a central courtyard of the Persian caravanserais has been influenced by the Persian architectural tradition. These differences in shape and symmetry may reflect the cultural and historical influences that shaped the design and construction of caravanserais in Iran and Anatolia during the Seljuk.

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Figure 2: Comparison of size, form and symmetry of axes (drawn by author according to images available in publications)

The comparison of the selected caravanserais revealed that in Persian caravanserais, the ratio of the courtyard to the closed spaces is almost the same. However, in Anatolian caravanserais, this ratio varies. For example, in Alara Han, the area of the courtyard is very small compared to the entire plan.

The comparison of the selected caravanserais indicated variations in the proportion of closed, semi-closed and open spaces for humans and animals, which is shown in Figure 3. In Alara Han, the proportion of closed and semi-closed spaces for humans is equal, while the proportion of closed space behind the rooms dedicated to animals is greater than the space for humans. In Aksaray Sultan Han, the proportion of closed spaces, which are used in winter, is greater than the semi-closed spaces, which are used in summer. Evdir Han does not have any closed spaces.

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In Robat-e Mahi, as a Persian caravanserai, the proportion of closed and semi-closed spaces is equal. Closed spaces are allocated for animals, whereas semi-closed spaces are dedicated to humans. The comparison of Robat-e Sharaf caravanserai exposed that the proportion of closed spaces is greater than the semi-closed spaces. In this caravanserai, semi-closed spaces are used as corridors, while closed spaces are used by humans and animals. Similarly, in Deyre Gachin caravanserai, the proportion of closed space is greater than the semi-closed space. In this caravanserai, semi-closed space is greater than the semi-closed space. In this caravanserai, semi-closed spaces are Iwans, which are used in summer. Closed spaces behind these Iwans are used in winter by humans. These variations in the proportion of closed, semi-closed, and open spaces may reflect the functional requirements and cultural practices of travelers and their animals during the Seljuk period. The design of these spaces may have been influenced by climate and regional differences.



Figure 3: Proportion of closed, semi-closed, and open spaces (drawn by author according to images available in publications)

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The comparison of the selected caravanserais discovered differences in the separation of spaces dedicated to humans and animals according to Figure 4. In Alara Han, spaces dedicated to humans and animals are completely separate. In Sultan Han, except for the south and east rooms, which belong to human accommodation, the rest of the spaces are commonly used by humans and animals. In Evdir Han, semi-closed spaces are commonly used by humans and animals. However, human accommodation spaces are built over platforms. In Robat-e Mahi and Robat-e Sharaf, spaces are completely separated for humans and animals. In Deyre Gachin, the rooms located along the sides of the courtyard were designated for humans. However, there are other spaces behind these rooms that are used by both humans and animals. The accommodation spaces for humans are built over platforms in this caravanserai. The difference in the design of these spaces in both Persian and Anatolian caravanserais may have been influenced by travelers' requirements.



Figure 4: Combination of spaces dedicated to humans and/or animals (drawn by author according to images available in publications)

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Based on the comparison of six caravanserais presented in Figure 5, it was found that the courtyard of Evdir Han and Robat-e Sharaf are surrounded by Riwaqs. In Robat-e Sharaf, Riwaq was used as a corridor, while in Evdir Han, it was used as a staying place. In Aksaray Sultan Han, Riwaq existed on the north side as a staying place in summer. The usage of Riwaqs in Anatolian caravanserais were more common than in Persian ones. These differences in the usage of Riwaqs may be the effect of climate conditions. The design of these spaces may have been influenced by the need to provide shelter from the sun and heat in summer and to create a comfortable resting place for travelers.



Figure 5: Existence of Riwaq (drawn by author according to images available in publications)

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Unlike Anatolian caravanserais, Persian caravanserais were designed based on four Iwans as indicated in Figure 6. In Persian caravanserais, one of the Iwans was designed as the main entrance, which connected to the portal. In most of them, the spaces behind the Iwans were covered by domes like the Iwans of Robat-e Mahi and Robat-e Sharaf. In addition to these four main Iwans, often the rooms surrounding courtyards were constructed as small Iwans as designed in Robat-e Mahi and Deyre Gachin. Furthermore, the rooms behind the Iwans in Deyre Gachin (shown in orange color in Figure 6), were used in winter, whereas Iwans themselves (shown in yellow color in Figure 6) were used in summer. The plan of Evdir Han is similar to Persian caravanserais in respect of Iwan's arrangement. Furthermore, except Evdir Han, the arrangement of Iwans in most Anatolian Seljuk caravanserais are completely different from Persian ones. Additionally, Aksaray Sultan Han has two Iwans on the axe of its entrance. The main point in all selected caravanserais is that the portals were defined as Iwans, as seen in Figure 6.



Figure 6: Existence of Iwan and Portal (drawn by author according to images available in publications)

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Based on the plans of selected Seljuk caravanserais presented in Figure 7 it is inferred that mosques did not have a specific location. In four caravanserais, namely Alara Han, Robat-e Mahi, Robat-e Sharaf, and Deyre Gachin, the positions of mosques were close to the portal. However, in Aksaray Sultan Han, the mosque was situated on the axis of the building in the center of the courtyard. Additionally, in Evdir Han, one of the four main Iwans was dedicated to the mosque.

Figure 7 shows the location of large flats belonging to kings and wealthy people, indicated by yellow and orange colors. In Robat-e Sharaf, one side of the building was designed as the king's flat, while in Deyre Gachin caravanserai, the corner was designed as a large house for Seljuk's kings. Moreover, there is another large flat in Deyre Gachin, which was used by wealthy people. Except for the entrance Iwan in Evdir Han and Robat-e Mahi, the other three Iwans were designated for usage by wealthy people. However, there was no flat or room for wealthy people in Alara Han. In Aksaray Sultan Han, two rooms situated on one side of the courtyard were used by wealthy people. The design of these spaces may have been influenced by the need to provide accommodation for travelers of different social classes.

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Figure 7: Location of mosque and kings' flat (drawn by author according to images available in publications)

Conclusion

It can be concluded that the spaces of caravanserais consist of modular components which are repeated in construction. This module can be Iwan and Riwaq, which were arranged around the courtyards or can be a module of a closed space in a square form, which is repeated in the caravanserais' plans.

In contrast to Anatolian caravanserais, most Persian caravanserais were designed with symmetry on two axes, in which the courtyard was the starting point. There are few caravanserais in Anatolia, which were constructed with symmetry in design like Evdir Han.

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In Persian caravanserais, square courtyard, which was surrounded by Riwaqs and Iwans were the base of building design. These Riwaqs and Iwans usually were used as accommodations. In most Persian caravanserais, four Iwans were placed in two axes of building alongside with courtyard for accommodation purposes. One of these Iwans was always designed as a portal. The space behind the Riwaqs and Iwans was used as stables.

Anatolian caravanserais were classified into four types as explained in the introduction. In this study, three types of them are selected and compared.

- In Closed Space and Courtyard Planned Caravanserais, closed space is totally modular and is used in winter. Additionally, the function of rooms around the courtyard is divided into three types. One type of room is used for accommodation in summer. And the other two types are used for service facilities such as bathrooms and mosques.
- Courtyard Planned Caravanserai is the combination of Riwaqs and Iwans. Iwans are located on 4 sides of the courtyard in axes. And Riwaqs are placed around the courtyard to be used as accommodations and stables.
- Concentric Planned Caravanserai structure is a combination of concentric rectangles. The inner rectangle is the courtyard, the second inner rectangle is utilized as accommodations and the outer parts are used as corridors and stables.

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