An analysis of the plan typology of vernacular Talas Houses

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Abstract
Kayseri has always been an important administrative center throughout its history. Talas, which is a town in Kayseri, is situated on the slopes of Ali Mountain which is to the northeast of Erciyes Mountain and about ten kilometers from the Kayseri city center. Talas is an important town with regard to the history of architecture including traditional vernacular texture occupied by Turkish, Armenian and Greek populations in the late Ottoman period. The Harman District, which is chosen as a case study, acts as the core of the housing texture of Talas. Plan formations of traditional Talas houses present information on related periods and local characteristic styles. Within the scope of this study, the local features of these houses, plan elements and plan types are analyzed. As a result of this analysis, a table of the plan typology of these houses is prepared. In a culturally rich settlement of Anatolia located at the crossroads of civilizations in Talas, nowadays the existing historical texture is gradually disappearing. The documentation of the vernacular architecture of Talas will have an impact on the conservation of the historical texture of the settlement as well as transferring the data to future generations. Furthermore, this data could be a guide in the area for site management projects prepared by the local municipality.

Keywords
Plan typology, Talas houses, Plan types of Talas houses, Vernacular architecture, Traditional houses.
1. Introduction

Kayseri is a city in Turkey located in the Central Anatolia (Figure 1) and is a settlement where many important historical events and ancient civilizations from the past to the present to place. It was the biggest city in Anatolia after Bursa during the 16th century (Farroqhi, 2014). Talas is one of the most developed towns in Kayseri. According to 1875 census, Talas had approximately consisting of 4650 non-Muslims men and 1200 Muslims men (Cömert, 2010). According to this, in the 19th century in Talas, eighty percent of the total population is non-Muslims and twenty percent is the Muslim population. In 19th century, the Harman district was one of the largest districts comprised of 188 houses, 11 vineyards, 31 gardens, 1 Mercer store, 1 farrier store, 1 secondary school, 2 wells, 1 mosque, 1 bakery, 1 grinder, 1 Armenian cemetery, and 1 government office (Cömert, 2000).

Today, with 3461 houses, 140,000 inhabitants, 33 districts, almost 1100 workplaces and stores and also 11 schools, Talas is the most culturally and economically developed center in the Kayseri neighborhood (Turgut & Aktuğ Kolay, 2017). The Han, Harman, and Kiçiköy districts are located in the lower part of Talas, while the rest of the districts are located in the upper part. From pictures taken in the 1880’s in which the whole town can be seen, it is observed that there were mansions and pavilions embellished by stone workmanship (Figure 2). After the population exchange following the Lozan Treaty Talas was left deserted and economically poor; most of the buildings were ruined and only 5% of these vernacular structures survived until now (Cömert, 2000).

The Harman district, located in the center of Talas, attracts attention with its unique dwellings. Most of the houses in the district had lost their original design. However, the ten of the houses still show the common architectural characteristics of the Talas vernacular houses. These houses have been selected as a case study and their locations are shown on the map below (Figure 3). During the research, measured drawings of the ten houses are done and the photographs are taken for the data. The evaluation of the plan types are analyzed and tables are prepared showing the results of the survey. The main aim of this study is to analyze the plan typology of Talas houses through a survey. In the survey, their plan types were classified and the plan typology of these houses was analyzed. The research data is evaluated to determine the plan typology of the vernacular Talas houses in the district.
2. Plan typology of Talas houses

Talas houses usually consist of a basement floor that is not perceived from the facade, a ground floor, and a first floor. In this study, the first floor consisting of Sofa and rooms is determining for plan typology. The basement of the Talas houses is mostly utilized for storage. The ground floors are usually occurred service areas and rooms. The most influential factor in the composition of the plan of the houses in the first floor is the Sofa which is the resting and recreation space. The Sofa is a wide space where doors of the rooms in the houses are opened, a "hall", in the dictionary of architecture and building (Hasol, 2016). The plan type of the house is determined directly by the shape and location of the Sofa. According to Eldem (1954), the plan type is best classified by the position of the Sofa, as a basic reference. Eldem classifies (1954) the four basic plan types of the houses, as follows:

1. Dış Sofalı (with an outer hall)
2. İç Sofalı (with an inner hall)
3. Orta Sofalı (with a central hall)
4. Sofasız (without a hall)

The plan typology of the Talas houses also are grouped under these four main headings. A Dış Sofa, which is an open area, is referred to as Hayat in many regions (Kuban, 1995). In addition, the houses having the Dış Sofa in Talas is classified with subheadings as without iwan (Type A) and with iwan (Type B). In the plan schemes of five of the ten houses, this feature is observed. In figure 4, 5 and 6, houses of Type A can be observed. Three of the Dış Sofalı plan types houses are without iwan. In figure 5, the house has two Dış Sofa on two different sides of the house of which one is facing the garden, another the street. The stairway is situated in the middle of the Dış Sofalar. The Sofa windows on the street facade of the house in figure 5 have two arches, resting on columns with their capitals and bases. However, these arch openings must have been closed with windows at a later time. In addition, semi-circle form iron console flower beds, in front of them were situated. The most decorated space of the first floor is the

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Sofa. On the first floor, it faces to the street with the decorated pavement of the floor and the ceiling in this house. Besides, a “U” shaped stone sedir is in front of the street facade of the Sofa. The Sofalar of the house are related to the street and garden in this example.

In figure 6, the plan type house with the Dış Sofa has a unique example with a Portico. On the ground floor, in this house, there is an iwan which has a height of two floors with an ornamental pool inside of it, and this iwan faces this Portico and a big garden. The stone stairs were situated as the console in the portico for the upper floor. At first, the stairs reach to the Sofa on the first floor. The northern facade of the Sofa (the square facade of the Sofa) had wooden columns, column capitals, and pilasters before restoration, however, today, these columns, column capitals and pilasters are not there. In addition, these openings have closed with windows later. In this house, the Sofa is faced to the Harman Square.

In Figure 7 and 8 houses, Type B scheme is observed. Therefore, two of the Dış Sofalı plan types houses are with iwan. The houses in figure 7 and figure 8 both have an iwan facing to the garden. According to Kuban (1995) in the classical form of Dış Sofalı houses the functional differentiation between the Sofa and iwan was very uncertain. The iwan as the most isolated part of the Dış Sofa becomes the natural area for sitting. The ideal form of the Sofa cannot be separated from the iwan. Moreover, the Sofa is “T” or “L” form, being the together with extension of this rectangular recess. On the other hand, the iwan may be interpreted as a spatial extension of the semi-open gallery towards the house interior.

In figure 7, the garden side of the iwan of the house is faced with a large lancet arch and capitals as pilasters, while in figure 8, the iwan of the house is faced to garden with three round arches, two columns, and capitals. There are also two the similar niches in two opposite walls in the iwans of these houses. These iwans have decoration similar to the decorated rooms in the first floor with sedir, ceiling and floor pavements. In addition, the house in figure 8 has a projection as right-angled form with cantilevered beams on the street façade.

Another plan type is İç Sofalı (with an inner hall). In these houses, the Sofa usually is designed as rooms and stairs on the three sides, while fourth side of it facing the garden or street. Therefore, this fourth side of the Sofa is the closed by a wall with windows. In figure 9, the Sofa of the house faces the garden with two windows. The Sofa has a stone sedir in front of the garden facade. In this house, five rooms are situated on the northern, southern and eastern sides of the Sofa.

In figure 10, the Sofa of the house...
faces the street with a projection. The projection of the Sofa has right-angled form and with cantilevered beams on the street façade (Figure 10). There are four rectangular windows on this projection façade. This Sofa is surrounded on the three side by four rooms and stairs.

In figure 11, the garden façade of the Sofa has different windows from the other windows of the houses. The windows of the Sofa are more dynamic than the other windows of the house. This situation can be noticed from the interior and exterior of the house. The Sofa is more elaborately decorated than other rooms of this house. In this house, different materials are used in the Sofa from the other spaces of the building as ground and ceiling coverings, therefore, it is more decorated with fine materials, such as the marble plate with ellipse form at the center of the floor. Therefore, indicating that the Sofa is a space that is used as both for the entertainment of guests and a social area. The projection of the Sofa has right-angled form and with cantilevered beams on the garden façade (Figure 11). The Sofa is surrounded by two rooms on the northern and southern side of the Sofa.

Among the ten houses, there is one house having an Orta Sofalı (with a central hall).

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**Figure 9. İç Sofalı Plan Type (With an Inner Hall).**

**Figure 10. İç Sofalı Plan Type (With an Inner Hall).**

**Figure 11. İç Sofalı Plan Type (With an Inner Hall).**

**Figure 12. Orta Sofalı Plan Type (With a Central Hall).**
central hall) plan type (Figure 12). Therefore, in Talas houses, this plan type is uncommonly used. On the other hand, this plan type of traditional houses was very popular in big towns and in particular in Istanbul. In this plan type, the Sofa is situated in the middle of the house and is surrounded on four sides by large rooms. One reason this plan type is not preferred is that people at Talas are more concerned with rural life and garden. This plan type mostly focuses on the center of the interior of the houses rather than the garden. Another reason for this must have been a need for a bigger house like having four rooms around Sofa. However, Talas houses are usually smaller and closer to human scale than Kayseri and Istanbul city houses.

Another plan type is the Sofasız (without a hall) plan type (Figure 13). In figure 13, we can observe this plan type. The Sofasız plan type is also an uncommon plan type for Talas Houses.

In Talas houses, the circulation spaces of the ground floor plan are the Taşlık, passage, and courtyard. According to Hasol (2010), taşlık is the interior part of the street entrance door in traditional houses. Taşlık is a space that created directly connected with street on the ground floor of the house (Figure 13). Taşlık usually is surrounded by rooms from one or two on the side. It is connected with one side to the street and with the opposite side to the garden. In the Taşlık there is usually a hearth, a niche and rarely a well. Another circulation space, the courtyard is open area with around rooms or garden walls. The courtyard, which is an integral part of the house on the ground floor, provides passage to the places. In Figure 14, there is the figure 8 house with courtyard. In the courtyard of this house, there are a toilet, a fountain, and a stairway for the upper floor. In addition, the door of the ground floor has opened to the courtyard.

The basement floor in Talas houses is usually found in every house. However, it covers only a small part at the bottom of the ground floor (Figure 15). In Figure 15, there is a basement floor plan of the house in the Figure 5 with a photograph. In the Talas houses, this basement floors have usually consisted of a room as vaulted or spaces carved in the rock. In some houses, rock-carved basements have been built according to the needs of the owner of the house and has continued to enlarge over time. These basement floors are a store of the house, where have keeping food during the long time. They function as a natural refrigerator.

The upper floors are as dynamic as possible with projections, different and large windows forms, the open-
ings of the Sofa, whereas, the design of the ground floors of the Talas houses is modest. When considering that the ground floors are used as stables and warehouses, such a design must be found suitable. This situation also shows that, in Talas there are more connections to the rural life and garden. Moreover, the plan typology may have been developing according to the requirements of the owners.

3. Conclusion

Talas houses usually consist of a basement floor that is not perceived from the facade, a ground floor, and a first floor. The design of the ground floors of Talas houses is functional whereas the upper floors are as dynamic as possible. The openings of the Sofa and projections give a movement to the upper floor.

In Talas, the preferred resting and recreation space is the Sofa. The most influential factor in the composition of the plan of the houses is the Sofa. The plan type of the house is directly determined by the design and location of the Sofa.

The typological table (Table 1) of the plans of the houses surveyed show that:

- Nine of the ten houses have a Sofa; so it can be said that the Sofa was often used as a plan element.
- Five of ten houses have a Dış Sofalı (with an outer hall) plan type; so it can be said that one of the most common plan type in Talas is Dış Sofalı plan type.
- Five of the ten houses have a Dış Sofa (an outer hall), three of these houses are without iwan and two are with iwan.
- Three of ten houses have an İç Sofalı (with an inner hall) plan type; so it can be said that the second most common plan type is İç Sofalı plan type.
- One of the ten houses has an Orta Sofalı (with a central hall) plan type; so it can be said that Orta Sofalı is a rare plan type.
- One of the ten houses has a Sofasız (without a hall) plan type; so it can be said that Sofasız is a rare plan type.

This survey shows that the plan typology of Talas houses mostly coincides with the plan typology of Sedad Hakki Eldem.

Table 1. The typological table of the plans of the selected houses.
In seven of the nine houses, the Sofa façades are on the garden side (Figure 4, 5, 7, 8, 9, 11, and 12), while the Sofa façades of the three houses of the nine houses are on the street side (Figure 5, 6, 10) and the Sofa façade of the one house faces both to the garden and street (Figure 5). Therefore, it can be said that people at Talas have valued their privacy, comfort, and view of the garden green area.

The Dış Sofa (an outer hall) of four of the five Dış Sofalı houses is directly connected to the garden (Figure 4, 5, 7, and 8), while one of them it is related only to the street (Figure 6) and one house is associated with both the garden and street (Figure 5). For this reason, it can be said that people at Talas has concerned with their gardens.

Three houses which have a Dış Sofa view towards the south, since there are hard climate conditions in this region (Figure 4, 5, and 7). Another two houses which have a Dış Sofa that is not facing to the south would presumably be a summer house used during only the summer season (Figure 6 and 8). The routine of moving to the vineyard in summer, despite of living in the city center in winter, is still favored today in Kayseri. These houses with their Sofa of the facing north may belong to the families who live in the city center of Kayseri and migrate Talas in the summer.

In the İç Sofalı (with an inner hall) plan types of Talas houses are mostly provided light and air circulation from one direction. Accordingly, this plan type is appropriate for Kayseri that has a continental climate. Therefore, the reason for the preference of the inner hall type is economic due to heating. In addition, according to Eldem (1954) in the traditional houses with a Dış Sofalı plan type (the outer hall) it is not possible to have numerous sections unless the façade is lengthened or the house is extended along the sides of the court. However, in the houses with the İç Sofalı (with an inner hall) plan type and particularly the Orta Sofalı (with a central hall) plan type, there is a great number of rooms which may be related to one another in a variety of ways. According to whether these rooms have identical or varied shapes, the meaning and form of the resulting plans show a great diversity. However, with this plan type house have been started to designed far from nature and garden works. Moreover, this plan type has clearly turned as an apartment plan type as a result of the process of urban life.

In Talas houses, the Orta Sofalı plan type, which is a common plan type in Istanbul (Eldem, 1954), is rarely used. As a matter of fact, the rich merchants of Kayseri, who are in contact with Istanbul, were expected to build their houses in Talas in a similar fashion to the Istanbul houses. However, we see that there are not many such houses in Talas according to the existing data.

The Turkish vernacular architecture in Anatolia is specific to the geography, climate, culture of the region. The survey shows that in Talas there are more connections to the rural life by using the plan typology with a Dış Sofa looking towards the garden. Dış sofa are located on the south of the houses due to the climatic reasons. The traditional houses of Anatolia still keep their traditional original designs, whereas the houses of the developed cities like Istanbul had lost their traditional design characters. As a result, these houses in Anatolia should widely be surveyed.

**References**


