

General Characteristics of Historical Safranbolu Houses Listed in the Unesco World Heritage Cities

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Abstract: Throughout history, people have been constantly looking for a structure in which they feel safe and live in peace and quiet. Houses are very important to the people. They've always made an effort to make their houses safe and also they tried to make sure that the houses' appearance is a thing of beauty. In Turkish history, historical houses in Safranbolu are the best example of those houses. In this research, general characteristics of historical Safranbolu houses and a variety of their features such as windows, doors, ceiling structures and protection status are examined.

Key words: Historical Safranbolu houses • World heritage • Anatolian • Culture • Civilization

INTRODUCTION

Research Aims: Historical Safranbolu houses are very important part of the heritage cities of the world. It is listed in the UNESCO world heritage cities. Safranbolu historical houses are being used by public now. And, also it reflects the spirit of historical cultural of Anatolian civilizations. Because lack of sufficient information about it, this study was prepared with general characteristic that related to floor and room numbers, area and the height of the rooms floor by floor, ceilings and their ornament styles, types of materials used, ceiling protection and surface layer procedure, ovens, sofas, built-in wardrobes, windows and doors of these houses were examined. Totally, 236 rooms, 864 windows and 64 street-doors of the 64 historical Safranbolu houses were examined one by one.

Introduction: Houses, without a doubt, are the most important structures for humanity as the saying goes, "in this world a house and in the other world faith". A house provides basic needs like nutrition and relaxation for the members of the family. Also it provides social, physiological and aesthetic requirements of the family [1].

For many centuries, mankind have been constantly altering the environment that they've been living on and they've been trying to adapt their houses to the environment and culture medium according to their financial status. Generally, Turkish household types consist of a ground floor which features a stone or adobe wall that surrounds the house and upper floors which sit on masonry walls or wooden beams. Upper floors generally have timber framing. Mezzanine floors have low-ceilings or regular ones [2].

In a traditional Turkish house, room is the most important unit. And each room has the features that is enough to accommodate a married couple. Each room has the same features. Even though size may vary, features are the same. These features are formed according to the traditional lifestyle of Turkish people. Since the lifestyle hasn't changed over the years, room design also has not changed. Since the Turkish household has evolved over the years to meet the requirements of the extended families' lifestyle, units of the houses have been standardized. However, traditional houses have become bigger for the modern Turkish families since the number of people in a family decreased [3].

It has become impossible to see any settlements that once had all the Turkish city characteristics in 1950s. The main reason is that in Anatolia, ancient Turkish houses diminishes every day. They are being demolished and replaced with foreign houses. Because of fires, different disasters and wars even the most beautiful Turkish cities have burned and countless of them have melted away. Today, most of the houses that we live in don't qualify as a Turkish house [4].

Ceilings are one of the most important peripherals of the houses in Anatolia. It's believed that Turkish people love the interior of the houses more than the exterior of them because of the affection that they have for the ceilings [5].

Turkish craftsmen have always made the ceilings which has a significant importance in our interior decoration matching with the wall structure, windows, ovens and also the characteristics of the building. Ceilings take shape according to the importance level of the rooms and sofas [6].

Instead of using serious patterns in building the houses, just like it's used in the religious houses, warm, joyful and soothing patterns were used. This can clearly be seen on ceilings, doors, built-in wardrobes in rooms and veils placed over the ovens [7].

Hacıbaloğlu [3] states that a Turkish room has a shape of square or rectangles close to squares, the ceilings also have the same geometry. In rooms with berm, in order to have a proportioned height with the place's size, the ceiling's height is decreased. Since the transition area's ceiling is not that important, not much of an attention is paid. However, since the area above the berm is much more important and it's the main living area, the ceiling design is important and the decoration of them has much more diversity. Tomsu [7] points out that in the Turkish houses ornaments can mostly be seen on ceilings and that the ceilings in Turkish houses are generally built out of wood. Ceiling ornaments are divided into two types. In the first type, the ornaments widen from the center of the ceiling to the walls. The center of the ceiling is filled with a big centerpiece. In the second type, the entire ceiling surface is covered with a cage-like shape. Günay [8] suggests that the ceilings are associated with the design directly and changes that are being made to the volume are also repeated in the ceilings and ceilings that are at the entrance of the rooms are lower than the regular room ceilings. He also points out that anteroom's ceilings are lower and plainer. In some of the rooms, lacunar type can be seen. Ceilings are not just functional but an ornament. The plainest ceilings can be built by

nailing some bars in different directions. Çakıroğlu [9] points out that in the Kayseri houses, bars that are used in covering of the ceiling are carved wood and that ornament of some of the houses were made by lining up wooden leaflets over the veneer. On the other hand, some of them were made by dividing the veneer into thin bars. Ünver [10] points out that in Edirne houses, the ceilings were made out of wood and that they were made from splints which have a thickness of no more than 3 centimeters. Also they were divided into shapes like rhombohedron and then decorated. Furthermore, there were edging on each side of them which are called sills. Berk [11] points out that in Konya houses, the walls were very important and that the ceilings were plainer. Sakaoğlu [12] points out that in Divriği's old houses the ceilings were suspended and were commonly known as swallow.

The purpose of this study is to determine the general characteristics of the historical Safranbolu houses. In order to do this, 64 houses in a neighborhood full of old historical houses in Safranbolu were selected and their various features such as number of rooms in a floor, ceilings, doors, windows, ovens, sofas and ornaments were examined.

Safranbolu is a typical Ottoman city, which is known as one of the best preserved town in Anatolia and it was listed in the UNESCO World Heritage Cities List in 1994. The town is located at the north-western Black Sea region and it is famous for its historical and traditional Turkish wooden houses with high cultural and architectural value. There are around 2000 traditional Turkish wooden houses built between 18th to 20th centuries in Safranbolu.

There are three historical districts called Çukur, Kıranköy and Bağlar in Safranbolu and it has a very unique mixture of the architectural patterns. The former non-Muslim district Kıranköy represents the contemporary European style built of stones, whereas in Çukur, houses are built of wood according to their Muslim tradition. In addition, Bağlar was a popular summer resort for Safranbolu and single houses within large gardens were the common pattern applied. The existence of these contrast architecture design have been attracting a significant number of tourists to this region.

According to the National Conservation Law No 2863, the above mentioned areas are declared as urban and natural site and strictly managed by the Municipality and Regional Conservation Council in order to protect its traditional architecture sites. The sustainable management system was introduced where the Municipality of Safranbolu and the Higher Education Institutions such as Faculty of Architecture and a Vocational School working

together to overcome technical support needed. In addition, Non-profit organisations including NGOs and the University are contributing to market its prestigious sites and to increase the awareness of this region.

People of Safranbolu find the happiness in their houses. Which is why they've always tried to enrich the interior decoration of their houses instead of the outside. In Safranbolu, what goes around in the house isn't revealed to the outside. That's why the ground floor doesn't have windows. On top of that there is a mezzanine floor. That floor is lower than the top floor. Its windows are smaller and fewer. Upstairs has timber framing and more windows and is livelier with accession and has a high ceil. Liven up by accessions, upstairs is covered by a plain roof. The function of the roof which has broad eaves and a slight slope is to protect the house with its plain form. In old Safranbolu houses the geometrical ornament style can be seen as a work of carpentry.

In Safranbolu, the wall of the house next to the street follows the natural street line. A double-leaf door is used to go into the house. The doors are plain but is strong enough to make sure the residents living inside are safe. Leafs are built by hanging three horizontal sashes into each other. Woods are nailed to the sashes by big nails called hobnails. These hobnails that are used building the doors are also used as ornaments. On the outer surface of the door, there is a knob which is used by the strangers to knock the door. There are also rings on midrails at each sash.

Instead of using serious patterns in building the houses, just like it's used in the religious houses, warm, joyful and soothing patterns were used as ornaments on the houses. Since the sofas are close to the ground and people have to sit near the ground, ceilings are much more visible. That's why the ceilings are the most visible part of the house which has ornaments. Hence, people always give importance to ceilings [13].

MATERIALS AND METHODS

In this study, historical Safranbolu houses were selected as study material. 64 houses which are in an old neighborhood in Safranbolu were examined. All the observations were made by examining those houses.

Floor and room numbers, area and the height of the rooms floor by floor, ceilings and their ornament styles, types of materials used, ceiling protection and surface layer procedure, ovens, sofas, built-in wardrobes, windows and doors of these houses were examined. 236 rooms, 864 windows and 64 street-doors of the 64 historical Safranbolu houses were examined one by one.

RESULTS

Floor and Room Characteristics of the Historical Safranbolu Houses: In the research, 236 rooms out of 64 houses were examined. Like in the traditional Turkish houses, the most important factor in a house in the historical Safranbolu houses is the number of rooms. Average number of floors and average number of rooms in those floors in historical Safranbolu houses can be seen on Table 1.

Number of floors and number of rooms vary by the number of people living in a house and the financial status of the family. According to the survey, 18.75% of Safranbolu houses are single storey. 59.37% of them are two storey and 21.87% are three storey. Moreover, out of 236 rooms, 51.75% of them are in first floor with an average of three. 34.67% of them are in second floor with an average of 4 and finally 13.56% of them are in third floor with an average of 3.

Ground floors of Safranbolu houses reach out to the first floor with its stone or adobe walls. Ground floor forms the foundation of the house and take on the carrying task. That's why there are no worries about the shape of this floor. Since its ceilings are formed only with ceiling beams, it's ignored. Mezzanine floors are generally for spending the daytime and doing chores. However, upper floors have more height and space so that guests can be hosted. Average height of the rooms and sofas by floor can be seen in Table 2.

As the Table 2 shows, average height of first floor rooms is 274.58cm and the average area is 13.87m². Average height of second floor rooms is 305.16cm and the average area is 15.51m². Third floor rooms are commonly used in summers. So their ceilings are higher. Average height of third floor rooms is 413.25cm and the average area is 40.36m².

In traditional Turkish houses, anterooms are one of the most important units in a house because they bond the rooms. They also affect the design of the houses. All rooms are connected with each other via anteroom. The anteroom is where generally weddings, meetings and traditional song nights are organized. Because of this, the rooms are larger and their ceilings are much higher. Studies are a proof of that because the average anteroom height is 413.25 cm and the area is 40.36 m². Traditional Turkish houses' ceilings are higher than today's houses' ceilings. Since the elementary family lifestyle has become popular and the multistorey buildings are in a huge demand, dimensions of those structures have changed inevitably.

Table 1: Average number of floors and average number of rooms in Safranbolu houses

| Number of Floors | | | Average Number of Rooms | | |
|------------------|------------|--------------|-------------------------|-----------------------|-----------------------|
| Single storey | Two storey | Three storey | 1 st Floor | 2 nd Floor | 3 rd Floor |
| 12 | 38 | 14 | 3 | 4 | 3 |
| 18.75% | 59.37% | 21.87% | 51, 75% | 34.67% | 13.56% |

Table 2: Average height of the rooms and sofas by floor in the traditional Safranbolu houses

| 1 st Floor Rooms | | 2 nd Floor Rooms | | 3 rd Floor Rooms | | Anteroom | |
|-----------------------------|------------------------|-----------------------------|------------------------|-----------------------------|------------------------|-------------|------------------------|
| Height (cm) | Area (m ²) | Height (cm) | Area (m ²) | Height (cm) | Area (m ²) | Height (cm) | Area (m ²) |
| 274.58 | 13.87 | 305.16 | 15.51 | 337.5 | 14.72 | 413.25 | 40.36 |

Table 3: Wood type, construction technique and ornaments used on ceilings

| Raw Material | | | Construction Technique | | Ornaments | | |
|--------------|------------|-------|------------------------|---------|-----------|-------------|-------|
| Scotch Pine | Black Pine | Other | Flat | Lacunar | Beaded | Centerpiece | None |
| 200 | 28 | 8 | 214 | 22 | 172 | 30 | 34 |
| 55.5% | 11.8% | 3 % | 90.6% | 9.3% | 72.8% | 12.7% | 14.5% |

Ceiling Shape and Ornament Style: Table 3 shows the wood type, construction technique and ornaments that are being used in ceiling construction.

According to the research, in the making of Safranbolu houses' ceilings, scotch pine was used in 55.5% of the houses. As a construction technique, it's understood that in 90.6% of the houses flat ceilings were used and only in 9.3% of the houses, lacunar ceilings can be seen. Construction technique of the ceilings are directly related with the design.

It's easier and cheaper to ornament the ceilings with beads, in 72.8% of the rooms different sizes of beads were used by mitring. As a result of this, flat, helieline, rectangle and square patterns are applied. Figure 1 shows some examples of beads and ceilings ornaments [8].

On the other hand, it's discovered that as an ornament in ceilings, centerpieces are also used. In these centerpieces, no materials were used except for wood. In 12.7% of the rooms that took part in the research, centerpieces can be seen.

It's understood from the research that as a pattern in centerpiece design, octagon, dodecagon, circular and byzantine stars, rose and leaf patterns were used. Figure 2 shows some examples of centerpieces in Safranbolu houses [8].

Ceiling Protection and Surface Treatment: Table 4 shows the information about status of the ceilings and whether or not the surface had a treatment.

Only 8.4% of the ceilings were labeled as good only because they were renovated. 42.3% of the ceilings were labeled as average because they preserved their original

shape and status. And 23.7% of the ceilings were labeled bad. However, it's estimated that since the renovations are increasing day by day, this number's would be affected positively.

Ovens, Sofas and Built-In Wardrobes in Historical Safranbolu Houses: Almost all rooms of the historical Safranbolu houses are designed so that a family can live there. Hence, they have the features to host a married couple. That's why each room has an oven to lighten, warm up and cook. The oven leans over one of the walls. The sofas which are for sitting in the rooms are positioned near the walls. Also, almost every room has a built-in wardrobe called alcove. Table 5 shows the numbers of ovens, sofas and built-in wardrobes.

236 rooms out of 64 different houses were inspected. According to the research, 44.9% of the rooms have an oven, 46.6% of them have a sofa and 81.35% of them have a built-in wardrobe. Also the average sofa height of those rooms is calculated as 29.71 cm. It's a sad but also a true fact that in some of the houses, ovens, built-in wardrobes and especially sofas that were included in primary structure are no longer in those rooms.

Window Properties: In this research, 864 windows were examined in total. Table 6 shows the current window system, window frame and casement measures, status of windows and opening direction of the windows.

Table 6 shows that 90.1% of the windows have a hinge system. Hinged windows system consists of a window frame and a casement. According to the survey, 40.8% of them have two wing sections whereas 37% of

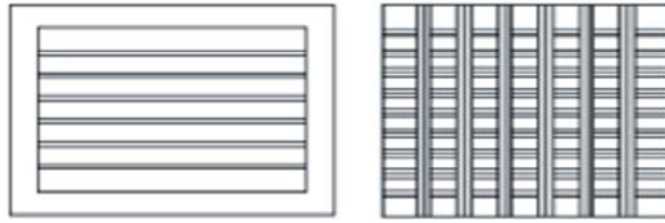


Fig. 1: Some examples of beads and ceilings ornaments

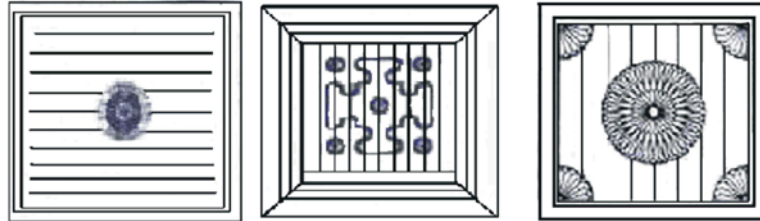


Fig. 2: Some pattern seen in centerpieces

Table 4: Status of the ceilings and surface treatments

| Status of the Ceilings | | | Surface Treatment | |
|------------------------|---------|-------|-------------------|-------|
| Good | Average | Bad | Yes | No |
| 80 | 100 | 56 | 122 | 114 |
| 8.4% | 42.3% | 23.7% | 51.6% | 48.3% |

Table 5: Average number of ovens, sofas and built-in wardrobes and average height of sofas

| Oven | | Sofa | | Built-in Wardrobe | | Average sofa height (cm) |
|--------|--------|--------|--------|-------------------|---------|--------------------------|
| Yes | No | Yes | No | Yes | No | |
| 106 | 130 | 110 | 126 | 192 | 44 | 29, 71 |
| 44, 9% | 55, 1% | 46, 6% | 53, 4% | 81, 35% | 18, 65% | |

Table 6: Window systems, window frame and casement measures, status of windows and opening direction of the windows

| Window system | | Frame and casement measures (cm) | | Wing Section Number | | | Opening Direction of the Windows | | |
|---------------|---------|----------------------------------|----------|---------------------|-------|-----|----------------------------------|---------|----------------------------|
| Hinge | Sliding | Frame | Casement | 1 | 2 | 4 | Inward | Outward | Average window height (cm) |
| 778 | 86 | 95x165 | 44x77 | 191 | 353 | 320 | 792 | 72 | 78, 43 |
| 90.1% | 9, 9% | | | 22.1% | 40.8% | 37% | 91.7% | 8.3% | |

Table 7: Blackcap, baluster, treillage and surface layer procedures

| Blackcap | | Baluster | | Treillage | | Surface Layer Procedure | | |
|----------|--------|----------|--------|-----------|--------|-------------------------|---------|--------|
| Yes | No | Yes | No | Yes | No | Ageing and Linseed Oil | Varnish | None |
| 502 | 362 | 390 | 474 | 230 | 634 | 452 | 158 | 254 |
| 58.10% | 41.89% | 45.13% | 54.86% | 26.62% | 73.37% | 52.33% | 18.28% | 29.39% |

them have four wing sections. However, only 22.1% of the windows have one wing section. 91.7% of the windows can be opened outwards. Also, the average window height is 78.43 cm. Table 7 shows blackcap, baluster, treillage and surface layer procedures applied on windows.

58.10% of 864 windows have blackcap, 45.13% of them have baluster and 26.62% of them have treillage. As a surface layer procedure, ageing and linseed oil were used with 52.33%. 29.39% of the windows have no surface layer procedures. Additionally, 18.28% of the windows were varnished as a surface layer procedure.

Table 8: Average door case and wing measures, types of wood that were used, which type of surface layer procedure was used and whether or not it has a ventilation unit

| Average door case and wing measures (cm) | | Type of Wood | | Surface Layer Procedure | | Ventilation Unit | |
|--|--------|--------------|--------|-------------------------|--------|------------------|--------|
| Door case | Wing | Pinewood | Other | Yes | No | Yes | No |
| 229x213 | 227x98 | 52 | 12 | 36 | 28 | 26 | 38 |
| | | 81.34% | 18.66% | 56.26% | 43.74% | 40.62% | 59.37% |

Table 9: The rings, knobs, hobnails and door locks on the doors

| Rings | | Knobs | | Hobnails | | Door Locks | |
|---------------------------------------|--------|---------------------------------------|--------|--|--------|---------------------------------------|-----|
| Yes | No | Yes | No | Yes | No | Yes | No |
| 34 | 30 | 28 | 36 | 46 | 18 | 48 | 16 |
| 53.12% | 46.88% | 43.75% | 56.25% | 71.87% | 28.13% | 75% | 25% |
| Average distance from the ground (cm) | | Average distance from the ground (cm) | | Average number of hobnails for each wing | | Average distance from the ground (cm) | |
| 109 | | 138 | | 27 | | 140 | |

Door Properties: Double-leaf doors are used to enter the historical Safranbolu houses. Doors have a plain appearance yet they give confidence to the residents. The doors have two wings and a door case surrounding it. Also there is a piece of wood called cyma which is connected to the door case outside the door's surface. Wings are made by connecting pieces of wood side by side with attaching two or three sashes. Over the street-door, there is a ventilation unit to make the porch both brighter and more spacious. Table 8 shows the average door case and wing measures, types of wood that were used, which type of surface layer procedure was used and whether or not it has a ventilation unit.

Table 8 show that the door case measures are similar to a square. 81.34% of the doors were made out of pinewood. And 18.66% of them were made out of other types of wood. 56.26% of the doors had a surface layer procedure. On the other hand, 43.74% of them had no surface layer procedure. As a surface layer procedure, ageing and linseed oil were used. However, renovations are put on a fast track in Safranbolu. And it focuses on doors. Nevertheless, almost half of the doors have no protection whatsoever. Also only 40.62% of the houses have a ventilation unit.

Woods that are used building the doors are attached together with sashes that people call cyma. It's done by nailing the hobnails from outside. These nails can be used as an ornament. There is a knob outside the door so that the strangers who come to the house can knock the door. Also there is a donut-shaped ring in order to open the door. This ring is placed over themidrail in both sides of the wings. These rings sit on the centerpiece which was made convexly. Table 9 shows the rings, knobs, hobnails and door locks on the doors.

53.12% of the doors have rings and 46.88% of them don't. Moreover, 43.75% of them have knobs whereas 56.25% of them don't. Hobnail numbers for each wing are the same and in 71.87% of them it's used as an ornament whereas in 28.13% of them it's not used as an ornament.

CONCLUSION AND RECOMMENDATIONS

Ceilings that were inspected as part of the research were all made out of wood and it was made an effort to amp up their aesthetic appearance. Almost all of the centerpieces that are used as ornaments are handicraft.

As a centerpiece, mostly octagon, dodecagon, circular and byzantine star patterns were used. Since it's easier and cheaper to ornament the ceilings with bars, flat, helieline, rectangle and square patterns which cut by mitering were applied.

In this study, it's realized that the ornaments can vary from one house to another because of its owner. Ornaments of the houses that are owned by wealthy merchants, managers, top-level dignitaries are of more quality and more aesthetic than other people's houses. Also, in the time of building the houses, ornaments of the houses that are owned by carpenters were much richer in terms of design and beauty.

In conclusion, even though some maintenance and protection problems were observed in the historical Safranbolu houses, since the owners of the houses are aware of the significance of the houses, there is no doubt that the houses' condition would get better in the near future.

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