Residential Architecture Of Botsa Rural Settlement In Konya-Turkey

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Abstract: Rural architecture and housing types cannot compete with today's technological developments and fall behind. For this reason, research should be conducted promptly especially on rural settlements, in which the most basic examples of traditional techniques and materials are seen and the extent of cultural degeneration has increased. Especially some rural areas in the geography of Anatolia, that replete with rich historical and cultural heritage, were able to preserve their architectural features. Unfortunately, rural architecture is being destroyed under the name of efforts for adapting to technological developments and modernism or urban development.

Botsa, which is a village in Hatunsaray district of Konya province located in central Turkey, is still able to remain in the original with its architecture and traditional dwelling features as much as its history, culture, geography and demographic structure. Botsa demonstrates settlement characteristics since the Bronze Age. It was home to Hittite, Phrygian, Hellenistic-Roman, Byzantine, Seljuk, Karamanid, Ottoman and Republican periods. The village was put under production by the Konya Conservation Board of the Ministry of Culture, however, its building registrations are deficient. The presence of people still living in this region, where the traces of different cultures are found, and the existence of efforts to maintain rural architecture affect the dynamics of the region and enhance the easier applicability of the proposals to be made.

In this study, Botsa village houses, on which the examples of traditional housing typology can be found, were subjected to a general examination. Reliefs of the sample houses have been taken, the details which uniquely belong to that area houses have been examined and it has been concluded that the houses bear endemic characteristics and need to be put under protection.

Keywords: Architecture, Konya, Rural Architecture, Rural Architecture Protection, Folk Architecture.

I. INTRODUCTION

Anatolia is a region that has been chosen as a settlement area by different civilizations since the early days of its history with its certain features such as geography, climate, convenience to living conditions and geopolitical position etc. Due to this feature, a very colorful and diverse texture formation is observed in terms of sociocultural dynamics and architecture. As the most important factor at the beginning of the formation of the first settlement in the entire world is human life, the settlement texture has been shaped according to human needs in Anatolia as well. This texture, created or contributed by different cultures, becomes a representative of the cultural heritage that has come from past to our present days (Öz, 2016).

Rural architecture is a type of architecture peculiar to a region and era that is mostly defined with respect to housing. The most important determinants in this type of architecture are: climate, natural features such as geological forms, soil and water, nearby materials and life culture. The functionality of the building precludes aesthetic concerns (Anonymous 1) Such characteristics as having positioned on a volcanic settlement texture that formed as a result of natural activities, the settlement order of the buildings that are peculiar to this texture, and the use of traditional materials in construction show that Botsa Houses are examples of rural architecture.

Botsa settlement is one of the concrete demonstrations of the heritage left by rich civilizations settled in Anatolia. In Botsa Village, where rural life and the rural architecture maintained by people to adapt to this type of life could be exhibited, the architecture stands out with its compliance with the environment in terms of space, materials and structure.

Among the studies related to Botsa, H. Bahar informs about the early settlement of Hatunsaray (Lystra) region which also subsumes Botsa (Bahar, 2012). H.Karpuz explains the Turkish-era structures of Botsa, especially the religious structures (Karpuz, 2012). E. Aygör tries to explain the housing architecture of Botsa...
through the examples of two houses (Aygör, 2012), and Ö. Karakul informs about the impacts of a holistic protection to be implemented in the settlement on the tourism sector (Karakul, 2017).

The aim of this study is to identify and document the characteristic features of Botsa Houses; and at the same, presenting some evidence so that the houses that are real cultural entities of the region are put under protection. The great effort spread by the people of the village, which had been renamed as Güneydere, to regain its original name has paved the way for the inclusion of this region within the purview of protection. Nevertheless, lack of registration for any of the buildings except for a single religious structure brings an important hassle. In order to sustain this cultural heritage that can be lost any moment, a collaboration among protection experts, conscious local people and local administrations are required.

The first article of the Venice Chart accepted in 1964 states that “The concept of a historic monument embraces not only the single architectural work but also the urban or rural setting in which is found the evidence of a particular civilization, as significant development or a historic event. This applies not only to great works of art but also to more modest works of the past which have acquired cultural significance with the passing of time”. Botsa Village and house typologies which have been home to many civilizations for centuries and contain various cultural layers are worth protecting in the light of cultural values added to these treasures by the inhabitants of the settlement so far. The region, which incorporates the traces of not only our own society, but the communities that have affected the past of the people of the world, and which is the heritage of the common past, must be sustained by the interventions to be made and should be supported to maintain its entity by gaining it to tourism.

II. BOTSA VILLAGE

II.I. The Location Of Botsa Village

Botsa is a settlement located 43 km. South-west of Konya in Turkey, on the border of Meram District and the North-west of Hatunsaray sub-district. The name Botsa means ‘cantharus masters’ in Latin (Anonymous 2). By force of the policy of converting settlement names into Turkish, the settlement was renamed and shown in the maps with the name of Güneydere between 1960 and 2011; however, the village regained Botsa name of their own accord in 2011 (Anonymous 3).

Figure1. The location of Botsa (Konya) in Turkey (Processed on Google Earth Image)

The area in which Botsa is located, formations belonging to Tertiary at the bottom and Quaternary at the top cover a large area. Volcanic geoformal elements have formed mountainous, plain and plateau areas through the efformation of the streams originating from the west (Tapur, 2012). The seasonal Dedecik creek and Botsa Stream bring water to the village. Botsa is situated on the foothills containing the rock tombs and the historical fortress which is located between the valley that extends along the Botsa stream and Dedecik Hill on the South and the valley on the South of the mountainous land known as Karşı Güney Yöre on its North. The lake which is on the West and at a higher altitude is the region with plateaus and large meadows (Figures 2-3).
Terrestrial steppe climate prevails in the region. Annual average temperature is 10°C, and average precipitation amount is 291.9 mm. Natural flora is oak tree communities.

The people are earning a living with agriculture and animal husbandry. Until the early years of the Republican era, the number of people who moved to the West of the country to work as seasonal workers due to the longevity was high (Yılmaz, 2012). Over the last twenty years, the villagers have continued to settle in Konya by closing their houses in Botsa for working and educating their children. With the inclusion of farmers under social security coverage, agriculture and animal husbandry have increased in the region. As a result, emigration has diminished and people's desire to remain in the village has increased. At the moment, Botsa is a settlement of 230 households.

The Hatunsaray district, in which Botsa is located, is a settlement area with a history that dates back to 9000 years, as far as it is known, thanks to its convenient formation for human settlement (Tapur, 2012). According to the environmental data the history of Zoldura Mound located to the East side of Botsa can be dated back to 5600-3000BC., and Kayadibi (Girvat) Mound, located on the South-east, can be dated back to 7000-5600 BC (Bahar, 2012). The historical periods identified in the region are Hittite, Phrygian, Hellenistic-Roman, Byzantine, Seljuk, Karamanid, Ottoman and finally Turkish Republic (Tapur, 2012). Botsa is located in the Isaura region in the ancient world. J. Sterret identified that Lystra, a city mentioned in the Bible, was Hatunsaray.

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1 Information received from Mukhtar (Headman) Dursun Uğurlu on April 20, 2015.
based on an epitaph he found in the region (Ramsay, 1960)². The city of Lystra is an important colony center in the Roman era. Lystra-Hatunsaray maintained its economic and political weight in every period of history.

III. BOTSA SETTLEMENT CHARACTERISTICS

Botsa is settled on three parallel mountain ranges, stretching in diminishing slopes from the mountainous lands on the West to the farm lands on the East, and the valleys amongst these. Of these three mountain ranges, the one the North is known as Kilise Beleni, the one in the middle with the village settlement containing the fortress and cave hills as Botsa center, and the one on the South as Dedecik Hill (Figure 4). The biggest of the streams flowing from West to East in the region is Botsa Stream that flows through the valley between Cave Hills and Kilise Beleni. The stream flowing through the village at the point where Cave Hills and Dedecik Hill merge is a smaller seasonal creek.

Figure 4. Botsa Settlement and the Fortress behind it from Dedecik Hill

The village center of Botsa is located on the East-West direction in a narrow and long form on the Southern foothills of the high-altitude mountainous area in the middle where historic rock formations and the fortress are located. At the Western point where Botsa settlement merges with farm lands, there is a mound the surface of which is used as a cemetery (Figures 5-6). Transportation to the village is provided through a road stretching from the East to the West and passing between Botsa and Dedecik Hill along with the stream. The road, entering the village through a bridge over the creek from the South of the mound, passes through the village and heads towards the plateaus when continued towards West (Figure 3).

Figure 5. The facade of a rock engraving on the West of Botsa
Figure 6. An overlook to the South-east of Botsa from the fortress.
The green hill that appears in the upper left is the mound.

² The Epitaph is in the Konya Archeology Museum today.
The road that stretches along the stream in the settlement is the main road that gets higher as it moves from the East to the West to divide the settlement into two as South and North. There is also a creek path in line with Dedecik Creek (Figure 6). The settlement texture is formed by wards of all sizes circumvented by roads. The two sides of the streets continue along the road with contiguous houses. Due to skimpy use of gardens on the settlement texture, the village looks like a stone (rock)-city (Figures 7-9). In places, there are dead-ends.

Figure 7. Examples of houses along the road passing through Botsa center

Figures 8-9. Examples of houses along the road passing through Botsa center
Botsa settlement has been put under protection as Urban Protected Area and Tertiary Natural and Archaeological Protected Area, but no conservation development plan was made \(^1\). The only registered building is the Aşağı Mahalle (Circled) Mosque on the West side of themound.

**IV. GENERAL FEATURES OF BOTSA HOUSES**

In Botsa, architectural examination was conducted on five house samples (Figure 10). All of the houses were settled in accordance with the land with a decreasing slope from the North to the South. The houses consist of two floors as ground floor and first floor. There are also house types that involve gardens with barns. The ground floors of the houses are entered from the low level street or from the garden. This space, designed as entrance hall and storage yard, is called "Hayat". The entrance to the first floor was given from the upper levelroad to the hall space. The main entrance from the ground floor to Hayat is mostly done beneath the wooden balcony exedra of the first floor. There is also a garden entrance gate in the houses with garden. Both gates of the houses are in the form of wooden double-wing doors. A few examples of single-wing doors are seen. At the same time, the ground floor and first floors are interconnected with a wooden staircase from within.

![Figure 10. Map showing the inventory numbers and locations of the houses that are worked on.](image)

**4.1 Spatial Features:**

Ground floor uses consist of barns, haylofts, wood bins and the spaces called "Hayat". The first floors are entirely used as living units (Table 1).

| Plan, Facade And Interior Space Features Of Botsa Houses |
|-----------------------------------|-------------------|-----------------|-----------------|----------------|
| Owner of the Building             | Nuri Ayyıldız      | Ali Özdeniz     | Kadir Uğurlu    | Dursun Uğurlu  |
| Fist Floor Plan Schemes           | Could not be entered | Could not be entered |            |               |
| Ground Floor Plan Schemes         |                   |                  |                 |               |

\(^1\)According to the resolution of the Ministry of Culture and Tourism Konya Protection Board dated 5.10.1994 and numbered 1084, the settlement was decided to be put under Urban and Tertiary Archaeological Protection. In addition to this resolution, the boundaries of the settlement were revised by the same Board with a resolution dated 17.03.2003 and numbered 4846 and a decision of Natural, Urban and Tertiary Protection was made for the area.
Ground floor settlements are designed independently from the first floor. "Hayat" is the large and main space on the entrance from the street to the ground floor (Figure 11). Barn and haystack are reached through "Hayat" There is a staircase leading to the first floor hall from this section (Figure 12). The staircase with a few steps made of stone at the point it reaches the floor and the upper steps are made of wood, is located at such a position which can easily be seen when Hayat is entered. The staircase can be concealed with a cap in some of the houses where it leads to the arbor. In addition to storage spaces such as cellar and warehouse, "Hayat" includes farming and husbandry equipment. Therefore, the "Hayat" entrance doors are in the form of large double-wing wooden doors (Figure 13).

Figure 11. The entrance-Hayat space in the Elibols' house
Figure 12. Wooden staircase connecting the ground floor to the first floor
The haylofts in the ground floor have small windows. When it is not possible to throw hay into the hayloft from outside, hay can be thrown through the hatch that opens to the hayloft from the hall ground of the first floor. Since this section in the houses is often filled with straw, they were either not able to be entered or hard to work on.

Barns could be separate spatial sections or rooms in the Hayat divided by walls. Stables which have rock floors, have wooden feeders for animals and wall niches for storing goods. We can identify the houses to be inner hall plan types (Table 1). The plan type can be seen on the first floors. The local name of the hall is “Çardak” (holl) and since it is shaped according to the land, it is seen in different sizes and geometrical forms in each house (Figure 14). Çardak is a circulation space with rooms, storage, kitchen on both sides, and a living space with the balcony section. The balcony space that is called “Tahtaboş” is elevated on columns from the ground. “Tahtaboş” which is the section of the Çardak that overhangs towards the street, is a living space with its side opening to the street is either open or closed with a window afterwards (Figure 46). In the house samples examined, the Çardak was seen to be in the shape of “L” or “I” surrounded by rooms from both sides. In some of the houses, in addition to the closed exedra, an open balcony is seen as well. In the Çardaks of some houses, hayloft hatches are seen on the ground nearby the entrance gate. The entrance gates of the Çardaks from the street are in the form of large wooden double wing doors (Figure 15).

Rooms are long and narrow with alcoves and bathing cubicles. On the wall where the door wing opens, there is an end to end complex of cupboards such as pitcher tub, flower tub, chest, alcove and bathing cubicle. In some houses, the alcovespace is allocated, but blinded with a curtain without completing the carpentry work. The windows of the room are beveled windows enlarging from the outer wall to inside. The rooms are encompassed with a wooden belt underneath and over the windows. In some houses, the upper belt is in the form of a shelf named “sergen” (Figures 16-17).
Figures 16-17. The main room wall organizations in the Ayyıldız's house

Kitchens are located on the first floor among the rooms. They are similar to the rooms with their windows, cupboards and niches. These are spaces with wooden shelves, ovens embedded in the wall, wall niches and cupboards.

Toilets and bathrooms are units that were added to the building afterwards. These are added in large and convenient spaces nearby the entrance gate of the hall. In a few samples, toilets were seen on the hayat space of the ground floor.

Roof settlements are flat soil housetops. The housetops of some houses are common areas that can be interconnected with the neighbor. While the use of soil housetops is a local feature, this has been broken by turning these housetops into sloping roofs recently.

4.2. The Construction Technique:

The construction technique applied in the Botsa region is based on hundreds of years of experience and knowledge. Factors such as climate, flora, geological structure, historical background and social structure have made a great influence on the formation, development and differentiation of these construction techniques. As in traditional construction techniques, the most important feature of the construction technique in Botsa's traditional houses is simplicity. All structures show the same characteristic. Masonry construction technique is applied. All of the walls are stone-bond with flitch beam in between and there are flitch beams above all of the doors, windows, niches, cupboards and exedra openings. The foundation of the house which sits on a bed rock also forms the 70-80 cm of ground floor wall. The outer wall thicknesses show the same features on the first floor as well, but the thicknesses occur 60-65 cm. On some of the inner walls and exedras, thin wall construction with plasterboard and wooden pillars is seen. All the outer walls and the inner walls of the ground floor are left unplastered, and all the inner walls of the first floors are plastered with soil. The soil plaster is surfaced with clay.

In order to handle the wooden hoisting ceilings, pillars are used on the ground floor spaces and especially in the first floor halls (Figure 14). In order to gain large spaces in the ground floor, double main beams (pillow beams), thick pillars and rock planting bases were used on the ground floor under some of the thick stone walls of the first floor to handle them (Figure 50).
Tahtaboş (balcony) and exedras in some rooms are of wooden structure and placed on top of the main wooden girders that are extended out of the building. The housetop covering over the exedras is handled by beams that are placed on top of the main ceiling beams that overflow by either sides of the tahtaboş. While in the older houses, the tahtaboş exedras are open exedras and the housetop is handled by pillars at the corners, these have been closed by window walls one by one and turned into a form of window overlooking three directions in a way similar to Turkish house exedras. The exedras are bolstered with wooden buttresses between the underneath of the exedra and the verge of the ceiling flitcher (Figures 13, 19).

Figure 19. On the facade of a house, stone wall with flitches and the wooden exedra overflowing toward the street on beams and bolstered with buttresses is seen.

The top of mezzanine floors, housetops and wooden joisting ceilings are covered with small tree branches named “pardı” and the mud surfacing (adobe mixture) prepared with mud mixed with straw is applied to seal. Another waterproof layer of soil is applied on top of the housetop cover. The housetop water is evacuated through gargoyles. Although the ground floors sit on the bed rock, the floor of the first floor is compressed soil gained through the adjustment of the mud coverage. Tahtaboş floors are timber-cover floors raised with wooden pillars from the hall floor.

4.3. Construction Materials:
Stone, wood, soil and a trace of iron were used as construction materials.

Stone: Stone is the main material used in construction in the village. Especially large and plain stones that have been carefully picked are used on the facades, structure and window edges (Figures 40-41). Stones are obtained from Botsa's rocky areas. The yellow stones used in epitaphs are brought from the reef terrain on the Southeast.

Wood: As wooden material, oak and juniper are used in the older houses, while walnut and poplar are used in the newer ones. Wood is used in flitches, ceiling beams, main beams, pillars and carpentry works in the buildings (Figures 18-19). While wooden window grids are seen on older houses, newer houses have iron window grids.

Soil: Soil is used as mortar in the constructions of floors and housetops. The soil that is used as mortar is obtained from the southeast of Botsa. On the housetops of first floors, the housetop floor is covered with a waterproof soil material brought from the North of the settlement. The plaster is surfaced with a kind of clay named "White soil."

Iron: Such iron accessories as window grids, door locks, bolts etc are handmade by blacksmiths.

4.4. Decoration and Facade Characteristics:
Both interior and facade of houses have a plain architecture. There are very few examples of interior decorations on wooden chests and flower tubs (Figures 16-17). Ceilings are wooden joisting without any decoration.

The main character of the facade of the houses is brought by stone architecture (Figures 13-19). On the facades, wooden flitches that appear among the unplastered stone facades of contiguous houses, soundproof or small windows, ground floors, room windows of the upper floor, room exedras, semi-open or closed balcony exedras, flat housetops and chimneys constitute a plain beauty.
Houses are without garden except for a few ones. Entrances were made directly from the street (Figure 20). Ivies that climb on walls are seen in the entrances. Epitaph stones and ornamental plates on stones that are seen in very few examples are among the remarkable features of facades (Figure 21). Chimneys are constructed out of stone in the form of rectangular prism with single flues. Cubic chimneys are also seen in the area (Figure 22).

![Figure 20. Facade Characteristics in Kör Çeşme Street](image1)

![Figure 21. Yellow Epitaph Stone on the Facade of the Ayyıldız's House](image2)

![Figure 22. Example of A Cubic Chimney](image3)

V. CONCLUSION

The settlement and houses of Botsa, are examples bearing divergent rural features of Anatolia with their unique characteristics. Geological formations, climate, construction materials, history and socio-cultural factors played a role in the formation of the settlement pattern. Rock carved buildings the history of which dates back to the 7000s B.C. and allowed by its geography were used in the settlement. Over time, the rock carved dwellings have been left and life was continued in the houses built nearby these dwellings in the settlement. Houses and other types of buildings such as mosques or village council were built with stone and wooden construction materials obtained from the nearby environment in the traditional architecture with masonry style. The houses show the characteristics of the interior hall plan of traditional Anatolian Turkish housing. In the houses, the living space called “Tahtaboş” which appears as exedras from the facade are remarkable.

Although the people who live on agriculture and animal husbandry has emigrated to big cities for twenty years, they have stopped emigrating or started to move back to the village as a result of enlargement of farm lands and provision of social opportunities to farmers in recent years. This development is an important reason for the acceleration of sustenance and restoration efforts for Botsa's traditional houses. When the houses present the life standards with desired quality level, the users will be pleased and their desire to live in these structures will enhance.
Although natural, urban, and tertiary archaeological protection are resolved in the settlement, the conservation plan has yet to be made. There are no registered buildings other than a single religious structure. Although there are many buildings that are qualified and peculiar to the texture, the registration efforts are insufficient. Corrosion in townhouses has accelerated. With the use of current construction techniques and materials, the physical structure is about to disappear. On the other hand, the stones that have broken off from the fortress and caves expose the settlement under the threat of landslide.

The Botsa people want to preserve their settlement, their buildings and traditions, but it is necessary that they are raised more awareness on that matter. The conservation and construction plans can be made as soon as possible and restorations of the buildings can be provided with material and technical assistance. The implementation of necessary restorations will speed up the development of the Botsa rural settlement through other activities such as tourism activities, cooperative development and training campaigns.

REFERENCES


Interviewers: