

Architectural Characteristics of the Bosnian Chardaklia House: Two Examples from Cazin

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Abstract

Traditional Bosnian houses have a long history dating back to the 15th century when Bosnia was captured by the Ottomans that had brought a new lifestyle and forms of urban development. This lifestyle and urban development were based on principles already established at the center of the Ottoman Empire in Anatolia. The new way of organizing settlements saw the establishment of residential areas, called *mahala*, in which houses were the main units and whose origin can be traced back to Central Anatolia. The tradition of building in Bosnia emerged in response to the local culture and conditions and continued to evolve into several variations, as is particularly evident in the case of the rural house type. This paper reviews the traditional Bosnian house and evaluates two preserved 19th century examples located in Cazin. Their architectural peculiarities suggest that the Alagić and Pozderac family houses are of the Bosnian *chardaklia* house type. This style of house follows a vertical plan starting from the basement, which served as a stable or storage, and building up towards the steep high roof characteristic of this type of house. Both houses are of a “central solution” type incorporating the architectural features characteristic of Bosanska Krajina (the region of Bosnian Krajina), such as projections on four sides making them reminiscent of fortified tower-houses (“kule”).

Keywords: Traditional Bosnian house, chardaklia house, Alagić family house, Pozderac family house, residential architecture

1. INTRODUCTION

Traditional Bosnian houses are unique remains of the past, presenting the physical know-how of a local tradition of a building technique that emerged in the 15th century, when Bosnia became part of the Ottoman Empire. Ottoman presence in the territory of Bosnia and Herzegovina also saw the spread of a new culture and new forms of settlement. Eldem (1984: 265) suggests that Ottoman urbanism was no grandiose scheme—it did not follow a rigid system of streets, but was rather an organic system that followed the contours of the topography. A similar system was applied in the Balkans and thus came to characterize urban settlement in Bosnia.

The Ottoman house, which took its final shape as timber based in Central Anatolia during the 17th century (Güçhan, 2017), has its origins in the nomadic period.¹ Its plan became a model to be used in other parts of the empire (Eldem, 1984). This style of house was defined by the spatial arrangements of its primary units, comprising a large room and a common space connecting smaller rooms (Küçükerman, 1996). In his study of the Turkish house, Eldem (1984) further describes the main elements of the Turkish house and defines the elements that determine the house plan, particularly its rooms, halls, dependencies, and stairs.

Kuban (2010: 486) explains the social and aesthetic message of the half-open spaces of the Turkish house, with *eyvans* (here extended space of the sofa) between the rooms, in terms of the various atmospheres of work, leisure, and relaxation they create. He also notes that this space was later transformed into an inner *sofa* (common space between the rooms), although in some examples from the 18th and 19th centuries it remained unenclosed. Güçhan (2017) proposes that ottoman house types were defined by their spatial order, which was formulated according to the geographical setting, the local materials available, and historical and cultural interaction.

Tracing out the base of the traditional Bosnian house, we may find that the same particular spatial principles characteristic of present Turkey were used in Bosnia, with several variations and significant local influence. These were not only related to climatic conditions, but also concerned the building techniques used. Firstly, in terms of climatic conditions, obvious differences appear between the southern part of the country, Herzegovina, which has a hot summer and dry climate, and in the central and northern parts, which are rich with forests and have much sharper winters. As such, in Herzegovina stone was the predominantly used material and spaces were extravagantly arranged, while further north in Bosnia the spaces were more likely to be enclosed and wood was the common building material. Furthermore, houses that were built within urban settlements or cities were much more developed, in terms of both interior and exterior arrangements, with many more details when compared to those found in rural areas. Redzic (1983) explained that traditional houses found in villages emerged from those developed in urban areas with much “poorer” details while basic spatial organization was quite same. Cerasi (1998:141) states that “*Even in the Bosnian countryside where the steep-roofed two-story house looked familiar to the town dweller, attentive analysis would disclose a wholly different architectural and technical conception.*” Cerasi also mentions that, in some areas, an affinity (although not one of common identity) between urban and rural house types can be confirmed.

Bosnian village houses were studied in detail by Kadic (1967). In his study, village houses were identified as ranging from the simplest archaic form to those that had well-developed spatial arrangements and forms. Kadic (1967) notes that village houses with upper

floor elevations were the most developed form, with plan quite similar to those built in urban areas. Cerasi (1998: 143) states that “*It must be admitted that at this stage of research we do not know enough about the origin of the typical Ottoman house. The type certainly does not go as far back as the birth of the Ottoman state. Chronicles and early drawings suggest that even in the sixteenth century its prototypes coexisted with the Anatolian and Balkan rural types....*”

However, most of the traditional houses in Bosnia that are still standing were built during the 18th and 19th centuries. This is partly a consequence of the common use of organic traditional materials, which are not long lasting, particularly wood and infills made of adobe.

This paper aims to review two of the quite limited remaining examples of traditional houses “*chardaklia*” in the northern part of Bosnia called Krajina. The two selected examples are found in the Bosnian town of Cazin. They can be identified as a type of houses originated from the local village type toward oriental spatial organization. Today, they are under state protection as they have been identified as national monuments and inscribed on the list of the Commission for the Protection of National Monuments of Bosnia and Herzegovina (Commission to Preserve National Monuments of B&H, 2009; Commission to Preserve National Monuments of B&H, 2012;). However, during a site visit it was obvious that a lack of proper maintenance had clearly led to the deterioration of these valuable examples. Examining these two houses can help us understand the spatial arrangement and the relationship between spaces, how traditional houses function in supporting the needs of family life, and the relevant architectural features, including forms, materialization, and the applied structural system.

2. DEFINITION OF THE TRADITIONAL BOSNIAN “CHARDAKLIA” HOUSE

In structuring traditional houses in Bosnia special attention was paid to arrange spaces that would fulfil the conditions of family life. This necessarily had included differentiation on private and public “zone”. In its essence the very same logic of arranging spaces could be seen in a traditional houses in villages while some of the spaces within the dwellings were built according to the need of life in a rural area.

A very commonly used form of traditional house in Bosnia was the *chardaklia* house. This was described by Kadic (1967: 57) as a type of house with one or more floors located above a basement that was used as a storage space or else as a stable. This type of house shows a higher level of spatial order when compared to some other simpler house types found predominantly in villages. For instance, in this case the fireplace is set on the upper floor. Observing the form of this house type, one can notice its strong basement made of stone, its high steep roof, and that the upper floors project outwards on all four sides (Kadic, 1967: 62-63). This fort-shaped house is characteristic of Bosnian Krajina, which was a far border region of the Ottoman Empire and thus of Bosnia.

Hadrovic (2017: 111) defined three variations (Figure 1) of the Bosnian *chardaklia* house according to the number of sections or ways it has and the arrangement of its *sofa* and rooms:

- a) Two-section houses (2 Tr),
- b) Three-section houses (3 Tr),
- c) Central solution houses (CSH).

Vertically, houses were developed according to the following scheme:

- a) Ground floor plus first floor (G and 1 floor),
- b) Basement plus ground floor plus first floor (B and Gr and 1 floor), and
- c) Basement plus ground floor plus first floor plus attic (B and Gr 1 floor and attic).

Each of these types, at the local or regional level, can show additional specificities, such as: precise symmetry along the vertical plane, asymmetry, or outward projection of the floor.

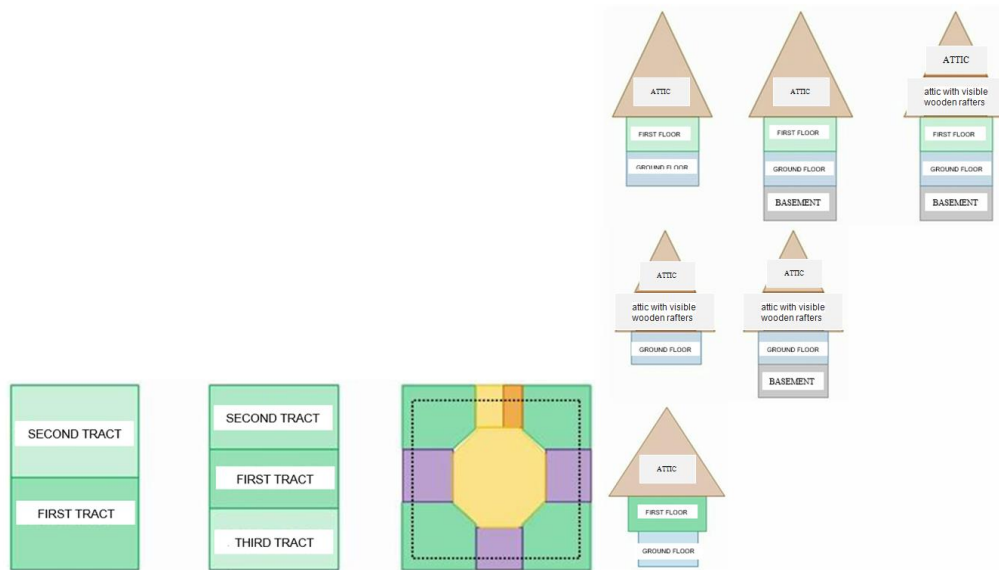


Figure 1. Plan types (left) and sections (right) of the Bosnian *chardaklia* house (Hadrovic, 2017: 111)

3. CASE STUDIES OF THE ALAGIĆ AND POZDERAC FAMILY HOUSES IN CAZIN

The traditional houses of the Alagić and Pozderac families in Cazin are both located in the central area (Figure 2), in the vicinity of the core historic zone and the fortress. The characteristics and features of the buildings show that they were built during the 19th century. Pozderac house was founded (1820) by Ahmet-aga Pozderac, son of Murat-aga. (Hadrovic 2017: 884).



Figure 2. Location of the Pozderac and Alagić family houses in Cazin (Google Maps, 2020), (Reproduced by the authors)



Figure 3. Alagić family house of in Cazin (Ahmet Hadrovic 2019)



Figure 4. Pozderac family house in Cazin (Ahmet Hadrovic, 2019)

The Alagić and Pozderac family houses (Figure 3 and Figure 4) can be identified as *chardaklia* houses of Bosnian Krajina built according to the central solution plan. The Alagić house, with its smaller layout compared to the Pozderac house, was built with a ground floor and one upper floor. The Pozderac family house is set on relatively steep terrain and comprises a basement, ground floor, and first floor. However, according to some peculiarities which will be explained further on, the Pozderac house is of a type characteristic of urban settlements (Table 1).

The Alagić house (Figure 5) has a square central solution plan (8.40 x 9.40 m of ground floor), whereas the upper floor projects outward along the southern and western facades. The upper floor previously extended out at the ground floor wall on the eastern facade as well, but this was later modified. The basement of the house was originally used as a stable, as was the case for most *chardaklia* houses. This space was later converted into a storage space and one part of the basement, particularly under the *divanhana* (locally used term for sofa), was enclosed with newly added staircase to be used as the main entrance to the house. The upper floor space, where the exit from the staircase was set, was converted into a small pantry. Later, a small annex was added to the house to be used as a toilet and space for ablutions. Thus, one part of the upper room (*čardak*) was used as a corridor leading to the new annex of the house. The rest of the upper floor elevation has four rooms (*čardak*) and a kitchen. The three *čardaks* are equipped with small sinks in the corners (*banjice*).



Figure 5. Drawings of the Pozderac (left) and Alagić (right) family houses in Cazin (Hadrovic, 2017)

The Pozderac family house (Figure 5) has a ground floor layout of 12.20 m x 9.50 m. Its basement has only half a floor as it is set on steep terrain. It was initially used as a stable and later converted into storage. The ground floor is pushed back about 15 cm towards the inner contour of the basement wall or foundation and covered with a 20 cm width of finely dressed stone, forming a cornice on the facade. The layout of the first floor consists of an entrance hall (*hajat*), two staircases, three rooms, a kitchen (*mutfak*), bathroom (*hamamdžik*), and a toilet. The bathroom (*hamamdžik*) is arranged here as a separate room, and not as part of a *musandera*, a specific inbuilt element in the wall of an oriental-type town house.

The specificity of this house concerns the arrangement of the “small room” as a “house masjid” (there are two niches in the wall oriented to the southeast, which have the function of a *mihrab*). In most Bosnian *chardaklia* houses there are “large rooms” that played the role of a village (*maha*) masjid, especially during the holy month of Ramadan (Hadrovic 2017: 888). The contour of the first floor, similar to most Bosnian *chardaklia* houses, is about 50 cm larger than the ground floor due to its projection outwards. This gives it the appearance of a fortified tower. The upper floor contains both men’s and women’s *divanhana*, five *chardak*, and a bathroom with anteroom (between the men’s and women’s parts of the house).

Table 1. Basic architectural characteristics of the Alagić and Pozderac family houses in Cazin

House	Location	Floor elevations	Layout characteristics	Architectural features	Basic Materials	Roof
Alagić house	Central position	Gr+1	Central hall plan Basement used as storage and upper floors as living spaces	Simple façade arrangement with projection on two sides Main rooms oriented towards the main facades Plastered facades	Stone Wood Adobe	High Pitched 60°
Pozderac house	Near central zone	Gr+2	Central hall with iwan ("men's and women's sofas") Staircase at the end of the hall Basement used as storage and upper floors as living spaces	Simple façade arrangement with projection of last floor on four sides Main living space oriented on the main façade Plastered facades	Stone Wood adobe	High and Steep Pitched 45°

3.1. Structural characteristics and building materials

The usual structural particularities of the traditional houses of Bosnia, with a strong and massive ground floor and the lighter structure of the upper floors, can be seen in these two examples (Table 2).

Table 2. Basic structural characteristics and materials of the Alagić and Pozderac family houses in Cazin

House	Exterior walls	Inner walls	Floor structure	Roof structure	Structural system
Alagica	Basement: Stone Upper floors: adobe-blocks ("čerpič") filling with wooden stiffeners called hatula	Adobe	Wooden beams Beams and planks filled with a mixture of earth, straw, and chaff	Wooden beams Roof covering: wooden shingle	Wooden skeleton "bondruk" set on a stone made basement
Pozderac	Basement: Stone Upper floors: adobe-blocks ("čerpič") filling with wooden stiffeners called hatula	adobe	Wooden beams Beams and planks filled with a mixture of earth, straw, and chaff	Wooden beams Roof covering: wooden shingle	Wooden skeleton "bondruk" set on a stone made basement
Example					

The ground floor has 80-90 cm thick walls made of stone. The walls of the upper floors in both houses are made of a wooden skeleton (*bondruk*) with an adobe (*čerpič*) filling and wooden stiffeners (*hatula*). The walls have been treated and painted with lime plaster on both sides.



Figure 6. Visible wall structure of the Pozderac family house in Cazin (Ahmet Hadrovic, 2019)

The floor structures in both houses are constructed with wooden beams, which are covered with wooden boards, while the space between the wooden planks is filled with compacted earth mixed with straw and chaff as thermal insulation. A single flight staircase connects the floors and is made of wood (*basamacı*). Also, these houses usually have steep pitched roofs, covered with wooden shingles.



Figure 7. Examples of ceilings in the Pozderac family house in Cazin (Ahmet Hadrovic, 2019)



Figure 8. Examples of staircases in the Pozderac family house (left) and in Alagic family house (right) in Cazin (Ahmet Hadrovic, 2019)

The ceiling of the ground floor at the Alagić house is made of massive oak beams and thick planks. The ceiling beams extend about 50 cm outside the contour of the ground floor. The structure of the floor between the first floor and the roof was made in the same way. The roof is voluminous, high, and steep (with a slope of about 60°), and its surface is covered with wooden shingles.



Figure 9. Roof shape of the Alagic house in Cazin (Ahmet Hadrovic, 2019)

In the case of the Pozderac house the upper floor ceilings are partly covered with wooden cladding (šiše) and some have a wooden covering and plaster on wooden laths. The floor structure towards the roof has no final floor, but rather a charge of earth and a ceiling structure of wooden beams is visible. The wooden rafters of the roof, together with a framework consisting of rafters, posts, and struts, under purlins, create a perfect truss, the local term for which translates as “triple chair.” The roof of the house is pitched at about 45° and is covered with wooden shingles. Its volume and proportions are impressive when compared to the overall house volume.



Figure 10. Roof structure of the Pozderac family house in Cazin (Ahmet Hadrovic, 2019)

3.2. Interior elements

In the Alagić family house, all the floor surfaces are basically made with finely worked wooden planks. Lime plaster was applied to walls and ceiling surfaces, sometimes with the addition of paint. Currently, some traditional decorative elements such, as woven Bosnian carpets, can be found, reminiscent of the past. However, many of the interior elements have been replaced with those of newer styles and materials.

As the Pozderac family house in Cazin is currently not in use, and (mostly) without furniture, it is possible to see the authentic treatment of the various surfaces. All interior wall surfaces have been treated with lime plaster and painted white. The ceilings are finished with wooden panels (šiše) or are plastered. The floors are primarily wooden, while the floor in the entrance area is paved with stone.



Figure 11. The Pozderac family house in Cazin: “large room” on the west corner of the ground floor (Ahmet Hadrovic, 2019)

Currently, no authentic furniture or interior elements dating back to the time when the house was constructed can be found. The current furniture is mainly from the second half of the 20th century and includes beds, cupboards, and showcases. There are visible traces suggesting the existence of a stove for heating the space on the first floor (and a metal sink in the foyer of the female part of the house).

3.3. Openings

In the Alagić family house in Cazin, some of the original doors have been preserved. They are made of massive, finely worked wooden boards decorated in a geometric style. However, most of the doors have been changed over time and replaced with those of newer design. Some of the original windows are preserved and are fixed at the edge of the wall surfaces. The windows are single glazed and their casements are divided into several window panels. Some of the window have iron bars added. The ground floor windows have white, painted frames and are most probably newer additions.



Figure 12. Newer door design of the Alagić family house in Cazin (Ahmet Hadrovic, 2019)



Figure 13. Ground floor and first floor windows of the Alagić family house in Cazin (Ahmet Hadrovic, 2019)

The openings of the Pozderac family house in Cazin have been largely preserved in their original form. As is the case with the Alagić house windows, they are single glazed and with multi-part sashes fixed at the outer edge of the wall surfaces. The windows in the basement and on part of the ground floor have protective iron bars (demiri) installed on the outside, apparently of a more recent date. The characteristic windows of the upper room are made as arched niche (Figure 11).



Figure 14. Windows in the small chardak of the Pozderac family house in Cazin (Ahmet Hadrovic, 2019)

The doors of the house (Table 3) include those with one wing and decorated with fine woodwork and those of a more simple design made of wooden boards fixed to each other. The main entrance door is of an arched type with two wings with nice decoration as a rosette and ring.

Table 3. Examples of door types found in the Pozderac family house in Cazin

Type of openings	Drawings	Description
		Two wings; Arched; Main entrance;
		One wing doors of the chardaks with woodwork details;
		Door of the kitchen, Single wing made of wooden boards.

3.4. Current condition of the houses

After conducting an inspection of the structures, we can conclude that the current overall condition and state of conservation of both houses is not satisfactory.

While the structural system of the Pozderac family house in Cazin is relatively preserved, there are some of the visible cracks in the wall structure which should be inspected in details before any further interventions. The interior surfaces of some rooms have deteriorated without layer of plaster and visible wall structure. Currently, only limited numbers of original interior elements can be found inside the houses. The Pozderac house was used by the Pozderac family until December 2, 1985, when it was bought by the Community for Culture of the Municipality of Cazin. The structural system of Alagić family house in Cazin is still in relatively good condition overall. No visible cracks or structural deformation was detected on the wall while the impact of the humidity is causing more profound damages.

In both houses wooden part of structure are dilapidated. The durability of the wooden structure and the roof covering was ensured thanks to the permanent presence of smoke in the roof, coming from the fireplaces inside the rooms and collecting in the attic space. As the buildings are not used as before (there is no open fireplace or permanent smoke in the roof), the wooden roofs have become less durable and resistant to the external factors and therefore require constant maintenance.

Considering their legal status, and exceptional architectural-historical value and ambience, these two houses require significant restoration and permanent maintenance. With regular maintenance and avoiding natural or man-made incidents (such as fires), the lifespans of the buildings, being constructed from high-quality timber, could be considerable extended.

4. CONCLUSION

The traditional Bosnian houses developed in the context of a lifestyle and culture rooted in Bosnia and the arrival of the Ottomans in the 15th century. Today, only a few examples remain (18th and 19th century houses), with most having vanished or becoming dilapidated due to the age of the materials used and a lack of maintenance or preservation—wood was the most commonly used building material in the central and northern areas of Bosnia.

However, the examples presented in this paper, the Alagić and Pozderac family houses in Cazin date from the late 19th century, can help us understand the basic spatial arrangement and building techniques used.

The Alagić house has smaller dimensions and is a bit simpler when compared to the Pozderac house. However, both reflect the same logic of distributing spaces and rooms around the common space of an inner *sofa*. In terms of the defining characteristics of form, both houses are characterized by steep and high wooden roofs above the simple cubic form of the floors, with the upper (final) floor having outward projections on all sides, forming a sort of fortification, which is especially characteristic of Bosnian Krajina.

The current preservation effort within B&H should be enhanced to provide permanent proper maintenance including presented examples as they represents valuable remains of the past and an open museum that allows on-site learning and comprehensive understanding of “chardaklija” house and intangible values aroused around as they are products of local knowledge, especially in rural areas, but of Ottoman tradition as well.

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All figures and charts in the article are produced by the declared author(s) in declared year in-text, unless stated otherwise.

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Notes

¹ In principle as Günay (1998) explained that the Turkish house can be broadly understood as houses in which Turks have lived throughout history which have evolved in different types. However, remaining examples are only to be traced back to 17th century.

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