

Bosnian Chardaklia House: House of the Korajlic Family in Hrvatinovici Near Tesanj

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Abstract— The Bosnian chardaklija house is one of those achievements of vernacular architecture of Bosnia and Herzegovina which, with its spatial organization, materialization and external appearance, most vividly reflects the nature of Bosnian people, the nature of his family and worldview. This house is not just a building. It is a materialized history of man and his family, at the same time as modern as a museum whose content testifies to the past and predicts the future. In the array of overall architectural programs of folk architecture in Bosnia and Herzegovina, the Bosnian chardaklija house stands out because its disposition at the time of original construction perceives the future, sometimes four generations of human generations following each other. It is a building designed in the way of the functioning of a living organism, so by its nature it is an example of understanding flexibility in architecture and the forerunner of modern understanding of bioclimatic, that is, sustainable architecture. The Korajlic family house in Hrvatinovici near Tesanj was built in 1856 on a plateau arranged on a slope with northwestern insolation, in the settlement Hrvatinovici, 1.5 km away from the center of Tesanj (geographical coordinates: 44° 36'44.34"N, 18° 00' 06.90" E, Elevation: 320 m.). According to its position on the property of the prominent Tesanj Korajlic family, the overall architectural physiognomy and historical and ambient characteristics, the Korajlic family house in Hrvatinovici near Tesanj is an extremely valuable example of the Bosnian Chardaklia House.

Keywords— Bosnian Chardaklia House, Korajlic family, Hrvatinovici near Tesanj.

I. INTRODUCTION

The Bosnian chardaklia house is, above all, the house of rich people in the countryside. On the one hand, it is firmly rooted in the tradition of folk architecture, but it also has elements of the city house as a transitional form from purely folk architecture to the solution of the city house where the influences of other, often geographically distant cultures and solutions are visible.

The house he designed and built, in which he lives in the complexity of his overall being, is the most concrete objectified image of a man, his family and the immediate and wider community in which he lives. By getting to know the Bosnian chardaklia house, one can get to know those dimensions of the being of the man of Bosnia and Herzegovina that are not directly written about here^[1, 2, 3].

The Korajlic family house in Hrvatinovici near Tesanj was built in 1856 on a plateau arranged on a slope with northwestern insolation, in the settlement Hrvatinovici, 1.5 km away from the center of Tesanj (geographical coordinates: 44° 36'44.34"N, 18° 00' 06.90" E, Elevation: 320 m.)¹, (Figure 1). According to its position on the property of the prominent Tesanj Korajlic family, the overall architectural physiognomy and historical and ambient characteristics, the Korajlic family house in Hrvatinovici near Tesanj is an extremely valuable example of the Bosnian chardaklia house².

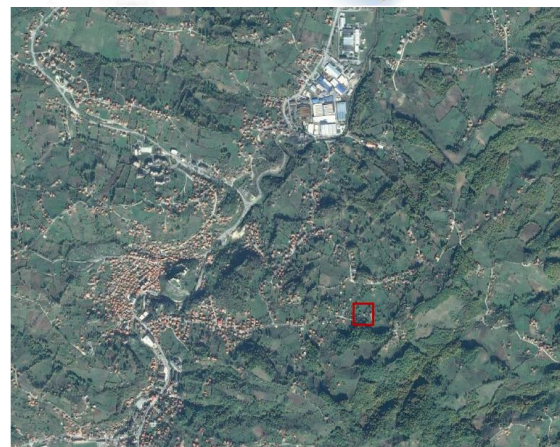


Figure 1. The Korajlic family House in Hrvatinovici near Tesanj. The location Source:

<https://slidetodoc.com/regionalna-podjela-bosne-i-hercegovine-geografske-regije-bosne/> (left)
Google Earth: Accessed 3/12/2022. (right)

¹ Source: Google Earth, Accessed: 3/12/2022

² The author visited this house 7/27/2016. years. With the kindness of Messrs. Omer and Ahmet Korajlic, the young Mr. Arman (Omera) Korajlic provided him with great direct assistance in filming the building.

The first, very striking impression of visitors to the Korajlic family house in Hrvatinovici near Tesanj is the presence of water in the immediate vicinity of the house. There are two finely decorated fountains, one of which is called "Hazna" (Bosnian: "riznica blaga", English: treasury), decorated by Osman Korajlic, grandfather of the current owner of the Omer house, before his departure for the Hajj in Mekha (Figure 2). Apart from the primary utilitarianism, the fountains (water) in the house complex of the Korajlic family also reflect the general view of the world of this family [4, 10, 11, 12, 13].



Figure 2. Omer Korajlic with his son Arman by the fountain „Hajji Hair“, „Hazna“ (left). Fountain next to the Korajlic family house in Hrvatinovici near Tesanj (right)

Source: Author (7/27/2016)

II. SPATIAL AND DESIGN CHARACTERISTICS OF THE HOUSE

The Korajlic family house in Hrvatinovici near Tesanj, according to the horizontal floor plan, belongs to the three-tract Bosnian chardaklia house [9] (Figure 3). Although spatially unique, the ground floor with three rows of pillars is divided into four tracts that do not coincide in plan with the tracts on the first floor, symmetrically arranged in relation to its horizontal plan (Figures 3, 9). The Korajlic family house in Hrvatinovici near Tesanj, according to its spatial-architectural characteristics, has some specifics of the chardaklia in Bosnian Krajina, characteristics of richer houses of Northern Bosnia, and characteristics of the central Bosnian chardaklia house of [5, 6, 7, 8, 9].

The specifics of the chardaklia house from the Bosnian Krajina are visible in the arrangement of the „vodnica“ and sanitary facilities in the hinterland³ (in relation to the access facade), and in the primary arrangement of the ground floor as a barn [8,9] (Figure 3). In addition, the construction of the floor was done in the manner of its construction in the area of Bosnian Krajina. The specifics of the house from Northern Bosnia can be read in the general appearance of the Korajlic family house, ie the emphasized contrast of the volume of the first floor and ground floor, where the volume of the ground floor is materialized with thick, strong stone walls, floors accentuated by cantilever overhangs over the contour of the floor, the whiteness of the exterior walls and a series of windows (Figures 3, 4, 5). The volume of the roof, given the dimensions of the base of the floor, is impressive, clean in its geometry, medium slope, covered with pepper-tile (Figures 4, 5).

The specificity of the house from Central Bosnia, applied to the Korajlic family house, is an external wooden staircase with a sofa („divanhana“) on the first floor, under which an access porch is arranged on the ground floor, in front of the ground floor entrance [8,9] (Figures 5, 6, 9).

The horizontal floor plan of the house, as already mentioned, has three tracts, with the central tract arranged as an entrance to the apartment (hayat) and as a „kuća“ with an open hearth, or living room (Figures 3, 10, 11). In the two end tracts of the base of the floor, two spacious chardaks are arranged (Figures 3, 22, 23). Next to the area of the „kuća“, on the northeast side of the building, an annex with a „vodnica“ and toilets was arranged, which was eventually removed (Figures 3, 7).

The attic, like all chardaklia houses in the entire area of Bosnia and Herzegovina, is an extremely important space in the way of life, ie the culture of living according to which the house was built. It is a space where meat and cheese were dried, but also a space whose permanent smoking protected the roof structure and roof from the destructive effects of weathering and insects [9] (Figures 12, 15).

III. CONSTRUCTION AND MATERIALIZATION

The ground floor of the house is a unique space, constructively solved with exterior walls of rough-hewn pieces of white firewood, 70-80 cm thick, and three rows with two wooden pillars (supported by stone feet) bearing massive wooden beams, which are about 40 - 50 cm cantilevered over two opposite sides of the ground floor contour (Figure 3). Transversely, on these beams, densely arranged (at a distance of 50-70 cm) wooden beams of the mezzanine-floor mezzanine structure were placed, which were cantilevered over the other two sides of the ground floor contour, thus the base of the complete (Figures 13, 14, 16).

³ The author's informant visiting this house, Mr. Omer Korajlic, calls this space a „killer“. In this house, this space had the function of a handy pantry for flour.

In the drawing (Figures 3, 7), the author outlined the location and disposition of the annex with the „vodnica“ and toilets, according to Mr. Omer Korajlic on the spot.

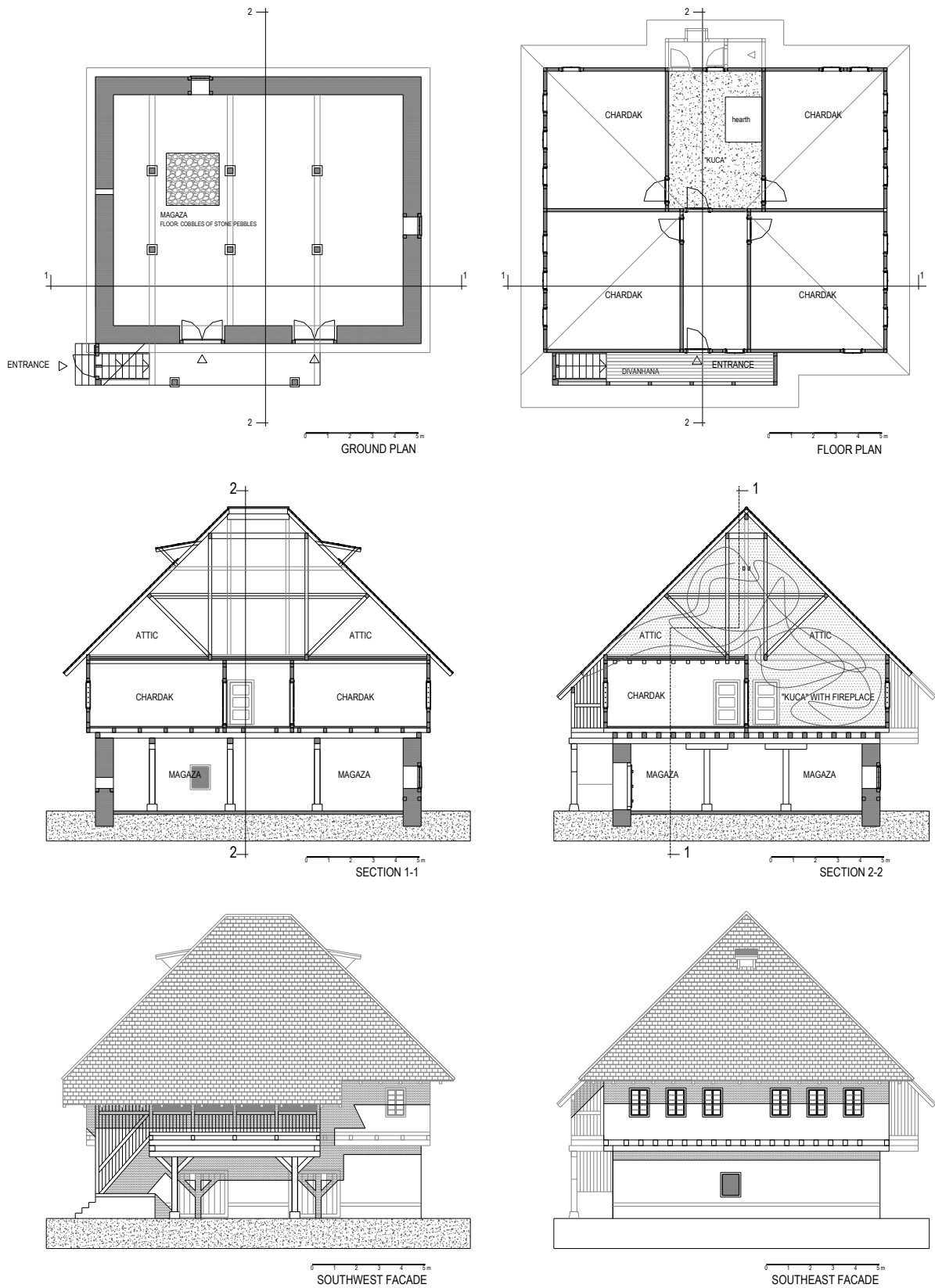


Figure 3. Korajlic family house in Hrvatinovci near Tesanj. Disposition

Source: Author (drawing, 2016)



Figure 4. Korajlić family house in Hrvatinovici near Tesanj. View of the house from the southwest (left) and northeast (right)
Source: Author (7/27/2016)



Figure 5. Korajlić family house in Hrvatinovici near Tesanj. View of the house from the northwest (left) and southeast (right)
Source: Author (7/27/2016)



Figure 6. Porch at the entrance to the ground floor, below the sofa on the first floor (left). Due to the (once) intensive traffic of people, goods and livestock, the floor covering of the courtyard is made of stone cobblestones (right)
Source: Author (7/27/2016)



Figure 7. At the place where there used to be an annex with a “vodnica” and toilets, water was brought and a sewer drain was arranged from the newly renovated sanitary facility in a large chardak, along the wall of the former “kuća”.

Source: Author (7/27/2016)



Figure 10. The space of the former “kuća” on the first floor. At the place in the outer wall, where the window is now, there used to be a door to the annex area where there was a “vodnica” and a toilet

Source: Author (7/27/2016)



Figure 8. The ground floor space was originally a barn, and over time it became a large house pantry

Source: Author (7/27/2016)



Figure 9. Wooden staircase which leads from the outside to the divanhana, ie to the residential floor on the first floor

Source: Author (7/27/2016)



Figure 11. Ladder to exit the proctor attic. Although portable, the ladder was constantly in place due to the frequent communication between the “kuća” and the attic

Source: Author (7/27/2016)



Figure 12. The attic space is open, with an engineered roof construction
Source: Author (7/27/2016)



Figure 15. Roof construction (left). Part of the roof structure (upright chair with wooden bar for drying meat (right)
Source: Author (7/27/2016)



Figure 13. Ground floor - first floor structure visible from the ground floor space
Source: Author (7/27/2016)



Figure 14. Cantilever overhang of the floor into the space outside the contour of the ground floor
Source: Author (7/27/2016)

Similar to the ground plan-floor plan structure, the floor plan-attic structure was constructed (Figures 17-20).

The construction of the roof, given its spatial dimensions, is an engineered and craft-precise combination of an upright and sloping chair (Figures 12, 15).

The floor covering in the attic is a relatively thick layer of compacted clay with shavings of straw and chaff, and slag on top. It is an effective thermal insulation for both summer and winter (Figure 12).

IV. SURFACE TREATMENT

The treatment of surfaces (walls, ceilings and floors) is closely connected with the culture of housing and the general view of the world of the Korajlic family, which is based on Islam. Performing prayer (prayer) five times a day ultimately required clean spaces and a clean human body^[10, 11]. The interior and exterior surfaces of the walls were plastered and painted with lime milk (Figures 17, 18, 19). The white walls, inside and out, are in a particularly pleasant contrast with the natural color of the wood. All ceilings are made of wood. The original ceilings have been preserved in all rooms of the house (Figures 17-20).

The floor coverings in all the upstairs rooms are made of wooden planks, which were usually covered with Bosnian woolen carpets (Figures 22, 23). The carpets in a way emphasized the main part of the floor surface with the highest concentration of functions. The floor in the „kuća“ („living room“) is made of stone slabs laid in the sand (Figure 21). The floor in the attic is made of packed clay with the addition of

straw and chaff and has good thermal insulation and acoustic performance (Figure 24).



Figure 16. Wall surface and ceiling on the ground floor
Source: Author (7/27/2016)



Figure 17. White painted wall surfaces and wooden ceiling in one of the chardaks
Source: Author (7/27/2016)



Figure 18. White painted wall surfaces and patinated wooden ceiling in one of the chardaks. The boards are made of beech wood
Source: Author (7/27/2016)



Figure 19. White painted wall surfaces and wooden ceiling in one of the chardaks
Source: Author (7/27/2016)



Figure 20. Wooden ceiling attic in the space of the hayat
Source: Author (7/27/2016)



Figure 21. The floor covering on the ground floor is an extremely high quality cobblestone
Source: Author (7/27/2016)



Figure 22. Floor covering in one chardak
Source: Author (7/27/2016)



Figure 24. Floor in the attic
Source: Author (7/27/2016)



Figure 23. Bosnian carpet in one chardak
Source: Author (7/27/2016)

V. DOORS AND WINDOWS

The doors and windows of the Korajlic family's house in Hrvatinovici near Tesanj are made of wood. The design of some doors is archaic (as found in other balconies throughout Bosnia and Herzegovina), (Figures 25, 26), while the design of some doors follows newer patterns (where the original door appears to have been replaced by newer doors), (Figure 27).

The width of the wooden window (window frame) follows the thickness of the wall. The windows are double-leafed with several panes filled with single glass (Figure 28). Some windows on the ground floor and on the first floor have wooden nets ("mushebak") which is a solution with utilitarian and aesthetic-religious meaning^[10, 11, 15] (Figures 28, 29, 30).

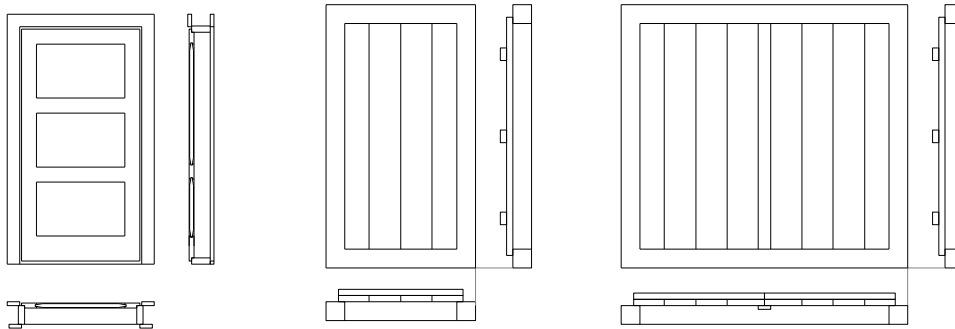


Figure 25. Different door designs

Source: Author (drawing, 7/27/2016)



Figure 26. Double-leaf front door on the ground floor

Source: Author (7/27/2016)



Figure 27. Entrance door to the residential floor, on the first floor (left) and the door on the veranda (right). The door was designed and made in the 70s of the 20th century.

Source: Author (7/27/2016)

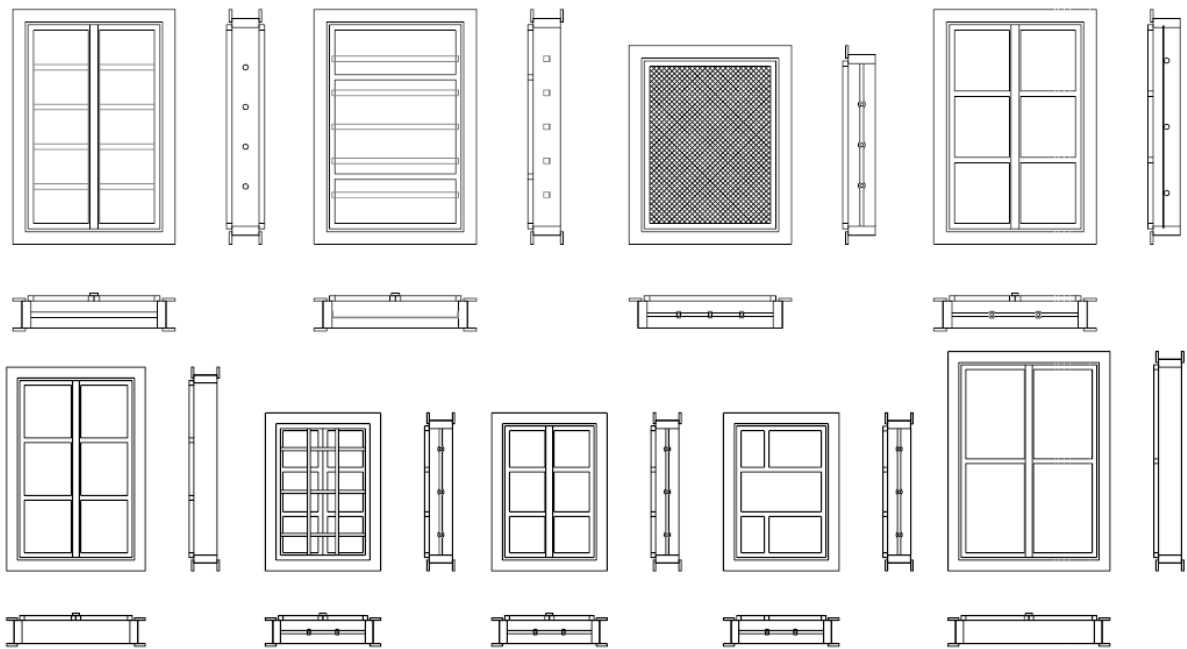


Figure 28. Different window designs

Source: Author (drawing, 7/27/2016)



Figure 29. Mushebak on the windows (left) and on the floor (right)
Source: Author (7/27/2016)



Figure 30. A window in the space of the hayat on the first floor, according to the divanhana
Source: Author (7/27/2016)

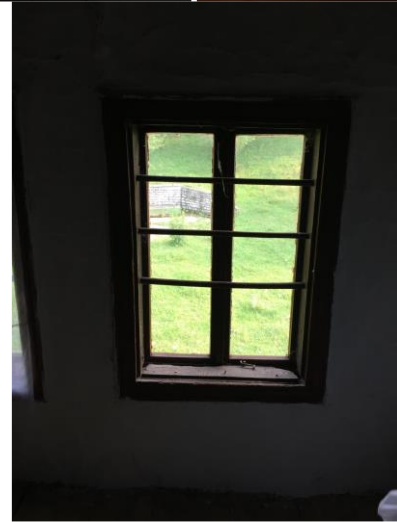


Figure 31. Views of the chardak window
Source: Author (7/27/2016)

VI. SPACE EQUIPMENT

In the house of the Korajlic family in Hrvatinovici near Tesanj, the equipment of her rooms has been reduced to a minimum. Similarly, the treatment of the surface of the space (walls, ceilings and floors) and the washing of the space follows the culture of housing and the worldview of the Korajlic family, which are based on Islam ^[10, 11]. Spaces are, conditionally speaking, „empty“, where their function is „activated“ by installing equipment located along the walls and ceilings. The focal point of the living room („kuća“) is the hearth, where the family gathers sitting on wooden chairs („chemlie“ and „tripod“) that are usually made by the host of the house. „Kuća“ also has the function of a kitchen in which food is prepared and dishes are stored, in wall niches („dulafi“) and on shelves. The smoke from the open fireplace in the „kuća“ goes into the attic space. Smoke smokes some foods (meat, cheese) and the roof structure, which protects it from the weather and insects. Also, the smoke from the brick kilns in the loggias is carried out through the flue pipes into the hayat space, and then through the ceiling into the attic space (Figure 34).

Sleeping equipment (mattresses, pillows and sheets) is „packed“ in the corner of the room and „activated as needed“.

In the corner of each of these rooms there is a small „bath“, a place for personal hygiene and religious-ritual washing („abdest“) (Figures 32, 33). Permanent food („winter food“) is stored in the basement, and various household items are stored in the attic.



Figure 32. Bathroom in one of the balconies designed as a chest
Source: Author (7/27/2016)



Figure 33. Bathroom in the form of a closet in one of the balconies. This bathroom has a bathtub as Figure 32.
Source: Author (7/27/2016)



Figure 34. The flue from the furnace in the loggia first passes into the space of the hayat, and then through the poison into the space of the attic
Source: Author (7/27/2016)



Figure 35. In addition to many usable items that are no longer used, a grain unwinding machine is stored on the ground floor.
Source: Author (7/27/2016)

VII. TODAY'S CONDITION AND PURPOSE OF THE HOUSE

The physical building of the Korajlic family house in Hrvatinovici near Tesanj is well preserved, since the house has been inhabited continuously since 1995. Over time, some elements of the house fell into disrepair and were replaced with new ones, more or less successfully. To this day, the house has preserved all the essential features of its original spatial and architectural corpus. Given the economic condition of the current generation of the Korajlić family, and more on their general enlightenment, worldview, and awareness of all aspects of the value of this house, it will be preserved for a long time. The house should certainly be included in the list of national monuments of Bosnia and Herzegovina, since its architectural appearance is intertwined with the influences of the creation of the Bosnian chardaklia house from all parts of Bosnia and Herzegovina.

VIII. CONCLUSION

The house of the Korajlic family in Hrvatinovici near Tesanj is an example of the traditional bioclimatic architecture

of Bosnia and Herzegovina. The principles of bioclimatic architecture are reflected in the following^[13]:

1. The structure is located on a sloping terrain (which ensures efficient drainage of rainwater around the house),
2. Natural building materials have been used in all building elements, and the place in the building corresponds to their best characteristics,
3. The disposition of the construction (horizontal and vertical plan) ensures the function of the central space with an open fireplace as a space that provides natural ventilation of the building (good microclimate)^[15] and protection of all building elements made of wood from aggressive insects and moisture,
4. Heating of individual rooms is done by masonry stoves, on wood as firewood, whereby the smoke generated in them is taken to the central space („dimluk“), which to some extent additionally heats the rooms („heat recovery“) and protects wooden elements of the physical construction of the building,
5. The spatial concept of the building allows it to be used as a house for one, two, three and even four families (flexibility of architecture).

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