The social effects on the architecture form; in the case of rural dwelling stone structure so called “Kulla”

Bekim Ceko  
*University for Business and Technology - UBT*, bekim.ceko@ubt-uni.net

Zekë Islamaj  
*University for Business and Technology*, zeke.islamaj@ubt-uni.net

Follow this and additional works at: [https://knowledgecenter.ubt-uni.net/conference](https://knowledgecenter.ubt-uni.net/conference)

**Recommended Citation**

[https://knowledgecenter.ubt-uni.net/conference/2019/events/243](https://knowledgecenter.ubt-uni.net/conference/2019/events/243)

This Event is brought to you for free and open access by the Publication and Journals at UBT Knowledge Center. It has been accepted for inclusion in UBT International Conference by an authorized administrator of UBT Knowledge Center. For more information, please contact knowledge.center@ubt-uni.net.
The social effects on the architecture form; in the case of rural dwelling stone structure so called “Kulla”

Bekim Çeko, Zekë Islamaj
UBT – Higher Education Institution, Lagjja Kalabria, 10000 p.n., Pristina, Kosovo

Abstract. The changes made in family structure that reflects to the way how we live, undoubtedly changes the physical surround too, that makes dwellings vulnerable either for abandonee or for destruction in order to build a new or release the space. This occurrence mostly affects in rural zones, whereas the main focus unfortunately now days has not the required attention. The focus of the study is mainly the rural dwelling stone structure so called “Kulla” that is settled in the west part of the Kosovo (that usually lie in the western part of Kosovo), respectively in the area of the Dukagjin plane. By computing the information about the stone structured dwellings, study aims to provide knowledge, whereas the form, plan and method of construction, simply follows a tradition for the time and place of their conceptions within the cause-consequence aspect. In this regard the social aspect of determining the form and the structure is prioritized. Therefore, regarding to the paper is chosen as a case study Kulla (Isniq village / Municipality of Deçan) in the Dukagjini region that relates to the area that has lifelong continuity by passing different civilization and administration, but always preserving the built identity.

Keywords: stone structures, Kulla building, social aspect, method of construction, dwelling, vernacular architecture.

Introduction

When we look at the main factors that shape the dwelling architecture mainly can be listed as climate conditions, geographical position, used material, construction technique, social, economic, administration, religious factors etc., what we can add for the case of the Kulla house, is that certain ethic codes can determine the shape and usage of the building. In this regard the field of the research is focused more in social effects on dwelling unit. Historically, dwelling is the organized pattern of communication, interaction, place and sense. While it reflects characteristics, way of life, codes of conduct, environmental preferences, images and time-place taxonomies of the ethnic group it belongs to, it also reflects images of its owner regarding its essence, its tendency for proving and explaining itself. Thus, it reflects a person’s character and distinction via its design, decoration and its style (So, 2000).

General criteria of the Dukagjini Kulla house

Although Kulla house is well known for the different researchers, such as Cerasi, Riza, Thomo, Yorgi, Doli, Kuban, Akin, Drancollı, etc., very rarely is explained in particular. The Kulla house as a formation that took place firstly in rural zones, it shows the way of treatment of space in a manner that creates specific identity of Albanian vernacular fortified structure. It is called fortified because of the structure mainly masonry and the small gaps within the wall beside a tine window called frengji were used to secure the building from outside threats.
The concept of Kulla in generally is spread in different regions and treated in different way. This type of building within the classification of researchers like Cerasi classifies as Epirus and Albanian Kula Houses (Cerasi, 1999), Akin classifies as the city and rural kullas in Albania (Akin, 2001), while Riza puts the Kulla house in to the specific house type that spreads over the northern Albania and Kosovo, (Riza E., 2013) by claiming that the formation of the kullas is in early 19th century firstly in the villages then in the cities too, like Peja, Gjakova, Junik, Peshkopi, Diber etc., (Riza & Haliti, Banesa Qytetare Kosovare e Shek. XVIII-XIX, 2006) furthermore researcher Pojani Kula building names as an Ottoman detached tower-house which served the dual purpose of defense and habitation. Mostly built between the 17th and 19th centuries, as for Several Albanian cites, including Gjirokastra, Berat, Shkodra, and Kruja, have Kulla houses (Pojani & Mezini, 2014)

![Kulla houses](image)

**Figure 1 Kulla houses (after Pojani and Mezini, 2014)**

**Kulla in the historical point of view**

The structure of the building that is multi floor three to four floor shows the concern of building technique placed in rural zones in a way of fortified building that relays to the built time social, economic conditions. In this regard the end of the ottoman era, of its weak impact in rural zones created self-defense buildings such as Kulas. So in this point of view can be said that Kulas provide not only shelter and habitable space but should offer a secure measurement for eventually threats within its surrounding. Also the tiny gaps in the upper part of the wall that is known as place where can be shoot with long rifle weapons, weapons of the 19th century makes it possible to believe that this kind of structure spread out from end of the 18th century, as declared the researcher Riza, too. Also some of the building has the inscriptions that show the built date in 1884 (the Kula of Peja) (Riza & Haliti, Banesa Qytetare Kosovare e Shek. XVIII-XIX, 2006)

The built time of this kind of building in a specific area in a time nationalism rise in Balkans against to the Ottoman empire, as the spatial solution of the Albanian community lived there created its own type of architecture.

**The spatial organization**

Building is three stories, rarely four story building. As the rural building is related to the rural life needs, therefore the ground floor is dedicated to the domestic animals like cow, horse, etc. In a certain organization in order feet the take after and easily move in or out the animals. Usually the ground floor is linked to the first floor with inner wooden stairs. Second floor is dedicated to the family especially female and family unit for each one multifunctional room. While the main
floor, is the rest one that it is in the upper part of the building. The main floor that reaches usually from outside stairs to the first floor and then with inner stairs to the main floor, consist the space called divanhane, the utility, and the main space called oda. The core of the house inside the room called oda is rectangular shaped, has the windows openings, and has the fire place. The organization is in a certain order of usage due to the habit that will discuss further more as main topic of the study.

Figure 2 1) Kula in Peja; 2) Kula in Gjakova; 3) Kula of Hashi Zeka in Peja (Riza,2013)

Like every building Kulas too cannot be imagine to appear in a specific day, but this is a long process until take form the way how we know the Kula. While analyzing the spatial organization of the room clearly can be seen that main activities that come from even ancient times. If we look at the nomadic life that was carried out with nomadic tents we can find similarities in spatial organization. Like in nomadic tent we have spaces around the fire place that is in the middle, surrounded by sleeping are, cabinets, earth floor, space for goods of life, etc.

Figure 3Nomadic Tent from the central Asia (Eruzun, 1990)

Dwelling unit as the earliest gender of construction is side by whole historical journey of human being as for undoubtedly same can be said to the ancient dwelling unit that can be seen similarities due to the recent archeological remains of the antic dwelling in this region. (Riza E., 2013)

**Building techniques and material**

Building with its masonry view dominates the perception as a huge cubic stone structure. This type of buildings usually is in a square base with 10x10m and approximately 9m high.
The thickness of the wall are around 90 cm, while outside is stone structure inside is covered with lime mortar. The floor structure lies on wooden beams and also the inner wall separators are from wooden structure.

**Case Study: Osdautaj’s Kulla**

Placed in the Isniq village is one of the three Kullas survived and the only one with four stories high. It is known to be constructed in the second half of the 19th century the most characteristic elements of the building remained originally. Recently was restored and turned in to the museum.

Mainly Kula house differs from other dwelling in main category that is placed in rural zone, where the main activity is agriculture and farming. As spatial solution meet the logical concept of organization by concentrating the space in a compact frame that allows more reliable spaces for agriculture and farming activities. As for the surrounding of the building, is constructed with other utility spaces too.

The main focus of the research is to create the link between the story facts that were gathered from the site by the people who lived in this space in order to meet the right manner of explaining the reflection of the day life as main impact on formation of the Kulla houses. In order to get the information on the site expedition has been articulated a questioner that is shown below with the answers that we get in the field of the village:

1. Approximate construction time – what about the building material?
2. How is organized the space inside the house?
3. How are winter heated and summer how are they protected from the sun?
4. Has there been any in-house production, such as vek, for silk or similar and was there any special space for those activities?
5. Is there water inside or outside the house?
6. Food, where is it prepared and how is it served?
7. Food storage where and how is it done?
8. How many family units did they live in?
9. When someone in the family gets married the spatial organization changes inside the house?

1. – When the Kulla was built?
1.1. - there are no exact sources of information regarding the time (year) of construction, but it is thought that the towers in Isniq Village, Municipality of Deçan / were built in the middle of the 19th century, mainly in the 1840s to 1860s.

1.2. – Where the building materials were provided?
1.2. – The towers were built with surrounding materials, mainly stone and wood, which were not far from the construction site. The stones for masonry exterior walls of the towers are brought from Lumbardhi river of Deçan and from Behovci (a trough between Isniq and Strelc village - Municipality of Deçan). Limestone for limestone is brought from Isniqi Mountain, Deçan and Belleja (village in Deçan). Whereas the timber material, treatments for floor construction, roof construction, partition wall construction, as well as enteriaer were brought from Isniq Mountains.

- For the construction of stone buildings, at that time, the craftsmen from Debar were distinguished, from which the towers of Isniq, Deçan and the whole Duagjin were built.

2. – Can you explain the Spatial organization of the Kulla?

a) - First level (ground level) - this level on the towers is designated as the first floor and is usually intended for pets (cows, calves, oxen and horses), for safety reasons and for protection against cold during winter season and is called a cot. The entrance door to the coffin is usually located near any corner, rarely in the middle of the base planar rib, and has a semicircular arched finish, made of carved stone called arches. The cotspace is illuminated and ventilated through one or more of the small windows and the high parapet, which are always oriented towards the courtyard of the tower.

- Housing in the towers has been developed as a gender-disaggregated area, with the second level being dedicated to female and children, and the third level to male.

- Entrance to the residential area - to the second level, is usually done through the entrance of the cot, while in some towers there was a separate entrance to this level.

- In some cases - later, the ground level has been used for housing, where the fire house has been located (daycare mainly for women and children and where preparation - baking and cooking is done). At this level there is also a dormitory room, as well as auxiliary cabinets: for cooking, for storing food, for exercising any craft such as eggs, etc.

b) - Second level (1st floor) - this level in the towers is designated as the second floor - at this level is usually the fire house (daily stay mainly for women and children), where the preparation - baking and boil food, then 2 to 3 bedrooms. Within each bedroom there is a corner for cleaning, for adults (hamamgjik), while infants and children from 2 to 3 years old are cleaned in a tub, made of wood and called troughs. - Then the space next to the stairs, where one part served as a corridor, in the other part is a crate made of wood. The uncle is used for cooking and preserving food (bread), while near the maxhe (garden), the place for cleaning dishes.

- These spaces were accessed with shoes, which are barefoot near the bedroom door, and in some cases in the bedrooms - near the bed. - The exterior walls of the towers, which are also retaining walls, are made of limestone and mortar as a bonding material, plastered internally with limestone and lime-plastered, while the partition walls are made of timber. Mud filling with straw or reed yarn and painted with lime. - The fire house (daycare mainly for women and children), usually has two windows, with a parapet (60 to 80cm), and oriented towards the courtyard of the tower. Bedrooms have a front window (60 to 80cm), tower-oriented or neighbor-oriented - in cases
where towers are removed from the boundary of the parcel, they are rarely street-oriented. In cases where the second-level windows (Floor 1) are street-oriented, they have smaller dimensions and higher parapets. The food preparation area, where the maxi is located, usually has a window, which when street-oriented, usually has smaller dimensions and a higher parapet. - The floors of all pavilions, at this level, are earthy, while the ceilings with boards and boards of wood.

c) - Third Level (2nd Floor) - this level on the towers is designated as the second floor and is intended for male members. At this level there is usually a men's chamber with sofas, with special entrances for guests through the outer wooden stairs, which lead from the courtyard to the third floor - to the sofa.
- In some types of towers, the outer staircase for guests did not extend up to the sofa, they ended up in the courtyard to the second level, where the branching is to the second and third level, then through the internal stairs which have been shared is continued to the third level - on the sofa.
- The interior space, where the outer stairs met with the interior stairs, was separated by a door. This entrance is used for the first floor - for living, as well as for guests, but not at the same time! Through these internal scales, which connected the second level to the third level, internal communication was developed under normal conditions between these two levels, and in cases of organizing different manifestations, these scales served to carry food.
- Usually up to the sofa is a shoelace, and in some cases even inside the men's room.
- In sofas (divanhane), the floor surface is usually made of wood boards, while the hallway to the WC is earthen. - The part of the sofa in which the lighting fixtures (mattress) were developed, in some towers is made of stone and some of wood. In this part (the mattress), the windows are placed on one of the walls - on one side, usually on the wall in front of the chamber entrance door, and sometimes on two walls of the tower - on both sides. These windows are usually smaller in size than ordinary windows, but in larger numbers, usually arranged in separate but separated into 2x3, 3x2, 3x3, 2x4 modules, and so on. When these openings are made of stone, they have a semicircular arched-stone mattress finish, while when the openings are made of wood, they have a decorative finish cut out of small arches placed in different positions.

- The exterior walls of the tower, on the floor in the portions where the openings were made, from the window sill up to the top have a significantly lower thickness. The part of the parapet has good wood processing and has been used for various purposes, such as: placement of material for landing in the chamber, lying of bedding, etc. During the cold and rainy weather, this mattress area was used for carpentry work, where working tools and various decorative elements of wood worked.
- During the summer season, the sofa and mattress were also used as a sleeping area, usually in the event of various events, but also in the summer when it was hot.
- At a corner of the divan, usually near the inner staircase, is the place for the abbad (abdest'hanja) to cleanse before prayers (prayer), and this space has also served to cleanse the vessels (mainly cups and cups). Opposite the interior stairs, in the divahane, is a door where through a corridor about 1m wide and about 5m long, you reach the toilet (WC), which is located on a console construction, usually made of wood and sometimes of stone and resting on one of the outer walls of the tower. The walls mounted on the console structure, in order not to create weight, were worked with wooden posts and stone wall coverings, but of a low thickness.

- The men's chamber (oda) that has served as a residence for men, toilets as a guest room, for organizing various parties, as well as for sleeping. There were elderly people and single bachelors - as well as male guests. - Even at this level, the exterior walls or at the same time the retaining walls have been made of stone, plastered with lime mortar and whitewashed, while the partition walls have been made of timber, with mud fill. straw or reed and dyed with lime. The dividing wall between the men's wardrobe and the sofa, on the side of the sofa, was decorated with wood-decorated elements. - The men's room had 2 windows, 2 windows - 1 on the front side and a smaller window near the abbey. - At this level, the floors have been made of different materials.

- The men's room had 2 windows, 2 windows - 1 on the front side and a smaller window near the abbey. - At this level, the floors have been made of different materials. - In the cabin, the whole floor surface has been earthy, while on both sides of the cabin, on the left side - the large side or the large hatch and on the right side - the small side or the small hatch, above the layer from the ground, there was a layer of straw, and on the straw the workmanship of sheep wool. These surfaces on both sides have been used for standing - sitting and sleeping. - In some towers in the last part of the large side (the large door) there was a simple wooden bed, 25 to 30cm high, which served as a floor, for sleeping, for laying the bedding, for sleeping and in mortal cases it was oriented according to the criteria of the Islamic Faith and above, for several hours during the rituals the corpse was placed until it was buried. - Approximately 2/3 of the surface of the small side (the small door) have been paved with coal, while 1/3 of that surface, near the entrance door to the cabin, has been earthy and in some cases the floor of porches. This surface has been used for heating, where during the winter season there is a tangar with fire in the middle of it.

- These two surfaces, intended for different purposes, are separated by a decorative element of wood, worked in the form of a fence of decorative wood, about 50 cm high, on the floor surface and is called a trapezoid. The upper part of the trapezoid has a finished finish in the form of decorative wooden beams, with a square cut of approximately 10cmx10cm dimensions, which in addition to the spacer has also served to reduce the heat around the tangar.

- The area between the two sides (rags), served as a wood supply to the hearth, had earthen floors and in some cases wood floor boards and was restricted on both sides along the two beams, decorated with wood.

- In the front portions of both sides (rags) existed from a closet, inserted into the wall, with wooden doors. The large closet, on the large side, had two-sided doors, made of decorative parts of high quality wood and served to preserve valuables, various documents and carpets, money, and so on. While on the smaller side, there was a closet, a little smaller, which had only one door also made of high quality decorated wood and served to hold coffee, cups, jars, trays, sugar, etc., which are used almost exclusively for guests and for holidays.
- At the front of the cabin - in front of the door and between the two sides (the rails), there was the place for the fire. The surface near the chimney, for safety reasons of non-spreading fire, has been made of stone tile and is called Sandrach.
- The whole (large) rug, especially the front part, near the chimney has been reserved for guests, while the small (rug) side has a sitting head.

3. **How are winter warmed and summer how are they protected from heat?**
- During winter and in cold weather they were heated by fire. The fire was set on fire place, which, due to the chimney created by the smoke removal, was located near of the exterior wall. Usually, the fire is only ignited in two spaces: in the fire house (daycare mainly for women and children) and in the men's room, while the other beds are not heated! In the fire house, the fire is lit all the time - in all seasons, even during the summer for food preparation, water heating, etc.
- There was no fire in the bedrooms, although it was not necessary as they were located at the middle level, above and below the men's room.
- Considering the thickness of the outer walls of the stone tower about 80cm, as well as the very small openings for lighting, have influenced the creation of suitable microclimate even during the summer season.

4. **Has there been any production within the home, such as separate or similar and was there any special space for this activity?**
- Although there was no separate place for towers in the tower, it has been an indispensable tool for women in almost every family, and is usually housed in a fire room - during the winter or in the dormitory or in the bedroom, conductive pads during the summer.
- While as a place for practicing men's crafts, such as carpentry, sofa and mattresses have been used during the winter season, and sometimes for fine workings such as deep carving - engraving of decorative elements of wood has served behind the trapdoor in the men's room.

5. **Was there water inside or outside the house (tower)?**
- The water supply to the towers is made from natural water sources (wells or deep wells). There was no water supply system in the tower, the water from the well was extracted with wooden pots, and then transported to the pier again through wooden pots, but of slightly larger size and different shapes (bushes and centuries). The water used for drinking is housed in a barrel-shaped wooden container, called a barrel, while the sanitary one is also housed in a wooden, open-top cylindrical container, which has been called a century. Both of these pots are usually made of mollusc wood obtained in the Isniqi Mountains.
- In cases where the water is required to be warm, it is placed in a metal container made of copper, called Kusi, which is heated in hot water. After heating, the water is again restored through a wooden container (sheka).

For this information, two persons from the village of Isniq who were living in the towers were interviewed: 1. - Smajl Rustem Osmonaj born in 1939, a master of construction, and 2. - Xhafer Mala Ahmetaj, born in 1950, a teacher of Technical Education.

Interviewees' expressions during the interview:

1. - Smajl Rustem Osmonaj, disa herë shpreh falënderime për angazhimet tona për të punuar diça për kullat, ai shprehet „Ah bre burra, shumë mirë po m'vjen që paski vendosë me punu diçka për kullat, se ato te na gati u zhdoksen, e besa u harruan kreyt. Neve na u dogj kulla gjatë luftës, e me i vetë tash nipat e mi dîcka per kullat, ata veç i rrudhin krahët se nuk dinë as për çka po bohet fjalë. Ishalla keni sukses e ky punim i juvi mirrinë ne duart e të rive tanë”.

- Smajl Rustem Osmonaj, sometimes expresses gratitude for our commitment to work something for the towers, he says "Ah, men, it seems to me that they decided to work something for the towers, that they almost disappeared, and they were completely forgotten. We were burnt down during the war, and now my nephews have something for the towers, they just shrug their wings".
because they don't even know what they're talking about. You have been successful and this work puts us in the hands of our youth."

2. — Ndërsa Xhafer Malë Ahmetaj, përgjigjet i jap gjithmonë duke u nisur nga përjetimet e tija personale dhe familjare gjatë asaj kohe, madje gjatë bisëdës rreth pikave të ndryshme për kullat shpeshëherë ka emocione dhe shprehet, "Ai bre djema, m' falni pak se kom emocione kur flas për kullat, tash m'keni kthye në kohën e rinisë e besa edhe të fminisë. Tash kaq shum po e përjetoj atë kohë saqë po m'duket se jam në kullë. Edhe ma herët disa njerez muaren shënime për kullat por ato punime kurë nuk e panë driten e Diellit, e ju ishalla boni dîcka e ky punim i juvi mrrinë ne dorën e atyne qe kanë interesim për kullat".

3. Xhafer Mala Ahmetaj, I always give the answers based on his personal and family experiences during that time, even when talking about different points about the towers there are often emotions and he says “He boys, please excuse me when I talk for the towers, you are now back in my youth and besides my childhood. I am experiencing it so much now that I seem to be in the tower.

**Conclusion**

As can be seen from the examination formation of the vernacular architecture, Kulla houses in particular in Dukagjini reagion is related to regional necessitation. Structure of organisation of the Kulla houses shows the impact of natural, envoirmental factors and socio-cultural characteristics as an essentialachievment of the human kind in that area.

Based on the field research and the interviews too, we matched the story to the designe in order tounderstand the spatial organisation, whereas the main floor as main objective of this study rusalts to have atleast 10 zones that has different meaning, in terms of arhitecture different functions.

**Figure 6 Different functions within the main floor of Kulla house**
As a result this study aims also to provide the awareness for the restoration project that should be carried out with an huge consideration of the story (scenario) or stories that makes the structure served for.

References


Appendix