

## Investigation Of Structural And Architectural Properties Of Historical Kastamonu Houses

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**Abstract:** The destruction and desolation of historical environment is important not only in the architectural terms but also in cultural and historical values. Kastamonu, the city rich in historical and cultural heritage, is one of the most important settlements of the traditional Turkish house and of the near-term Ottoman architecture. In this study, the architectural and structural features of the Historical Kastamonu Houses are examined and the causes of damage to houses are mentioned in the light of this information.

**Keywords:** - Kastamonu Houses, architectural, historical, cultural.

Date of Submission: 15-12-2017

Date of acceptance: 30-12-2017

### I. INTRODUCTION

Traditional Turkish houses have undergone major developments in time and in regions distinct in terms of climate, nature and culture, and this has brought different house types. On the other hand, all traditional houses are made up of certain cultural values. When the architectural design and details of traditional Turkish houses are examined, it is seen that all designs and solutions serve a certain purpose and have a certain benefit. In particular, the concept of privacy developed through the transition to settled life and acceptance of Islam; played an important role in the formation of traditional Turkish houses. Plan features of traditional Turkish houses, use of floors in houses, sofas, haremlik selamlık (separate) rooms, who came windows, rotating cabinets, built-in cabinets, doors, door knockers and the like accessories and fittings are design elements that are shaped by the culture of life [1].

The main purpose of protecting of the architectural legacy is to transfer the cultural asset's integrity and distinctive properties. To archive this, it requires collecting and evaluating information in terms of architectural structure systems, construction materials, architectural figurations etc. Thanks to this type of the evaluations, it can be presented to the next generation with written and visual data about facing extinction cultural assets [2, 3].

Today the most important of physical input that Kastamonu historical settlement can survive the existence is the city walls of the city core. When the settlement center, the neighborhood around the castle and the street structures are examined, traces of the city walls can be seen. There are 564 registered buildings in the city center of Kastamonu. 358 of these buildings consisting of religious, cultural, monumental and civil structures form the traditional Kastamonu dwellings reflecting the architectural characteristics of the region [4].



Fig 1.1 Kastamonu Castle and historical houses



Fig 1.2 Eflanili Mansion [14]

## II. HISTORY OF KASTAMONU

Kastamonu has full of artifacts left by many of the feudality and the state which continue uninterrupted from the first-century to the day-to-day civilizations. Some of these are the rock tombs from the Phrygian period, the Yılanlı Mosque (from the Çobanoğulları) and the Madrasah (which was used as science center), Ismail Bey Complex from Candaroğulları and Nasrullah Mosque from the Ottomans. [5].

## III. PLACE OF HISTORICAL KASTAMONU HOUSES IN TURKISH HOUSING ARCHITECTURE

**3.1 Characteristic Features:** The houses of Kastamonu were built as multi-room, in accordance with the traditional descent Ottoman family type. There are at least six rooms in these houses where three generations lived together most of the time. Kastamonu houses are also being considered as a transition between Anatolian houses and Istanbul houses. Majority of the houses which reached our contemporary decades in Kastamonu that are visited daily have two-storey buildings. 80% of them are wood, 10% are masonry bricks (hand-made stone). However, reinforced concrete constructed in recent years in the east of Kastamonu Stream in the sections between the city center and Dereboyu today, creates a great contradiction with the old texture of the city. In Kastamonu houses, although the wooden is used very broadly, the substructure is stone and the first floors are closed to outdoors. The walls are underpinned by vertical and horizontal lines between mud bricks and bricks on the upper floors. The second and third floors of the houses are mostly in the form of towing floors and protrude outwards. One characteristic of the Kastamonu houses is the triangular shape of the eaves. [6].



**Fig 3.1.** Street structure and location of houses [15].

**3.2 Floors and Rooms:** The ground floor of Kastamonu's two-storey mansions is not as useless and unpurposeful as it is in other cities, it is the floor where individual life is opened and daily life begins. The first floors are the common area of family life while the second floors are designed as private spaces reserved for the guests of the house. [7]

The basement floor is made of stone because of its dampness and protection from cold. This floor is generally used as a work place or cellar, and as a barn in the countryside. Each floor of these houses is made up of rooms with high ceilings, lots of windows and separate saloons. Each floor is connected to each other by stairs. The separation of the floors by stairs have for each floor to be used separately in case of extending and expanding the family in course of time [8].

**3.3 Lifestyle:** Main theme of construction and civil architecture is that not blocking the sunshine picturesque view of your neighbor, thinking of using the area the most convenient way, best seen in Kastamonu's mansions.

Another important difference lies behind in Kastamonu mansions is that each level of the structures take part in daily life. The first floor of Kastamonu's three-storey mansions is not blind spot, but it is the floor where every person is used actively and daily life begins in this room. The second floor is mutual and common area for all family members whereas the third floors are designed mostly as private places [7].

**3.4 Toilet (WC) & Bathroom:** Toilets in Kastamonu usually are constructed inner site of mansions. Observing out of the mansion, the toilets are seen in the garden of some of the houses, the mansions which have ablution place, with stone marble, more organized toilets are found especially in later period constructed residences [9].

In all floors, each bedroom has bathrooms in the shape-style of wardrobe resembling parental bathrooms [8].

**3.5Kitchen:** The kitchens are designed as separate buildings within the garden in some houses. It has been observed that majority of mansions have the kitchen on the ground floor and with the oven. It has been very often seen, the stone countertops are equipped with items such as water reservoirs [9].

**3.6Exterior Outer Space Layout:** Generally Kastamonu mansions have two or three, rarely four floors, each part of outlook layers have been set in motioned with extension parts windows at every angle side of the houses. To eradicate deformation of some part of the mansions, sometimes to increase space of the mansions or to extend bow-window balcony in some perspective; re-arranging the perspective of the mansion and rooftop with only made of glassess, which is being built by same purpose of bow-window balcony, are increased both street silhouette and picturesque of the city. It is being created more windows to take more sunlight on rooftop, sofa and rooms. The windows mostly have vertical wing leaf [9].



**Fig 3.2** Various outer side examples [12].

**3.7Decorative Objects:** The decoration, which is usually made in the form of wooden workmanship, is made of plaster in veils, butter and top windows. In the Anatolian residence tradition, it has been seen that the shelves which are named as “terek” and “sergen” are not common in Kastamonu [9].



**Fig 3.3** Daday Köpekçioğlu (Seyibeyoğlu) Mansion Ceiling [16].

#### **IV. FIGURES AND TABLES URBAN TEXTURE**

Kastamonu is a city located in the Northwest Anatolia Region of Turkey and divided into two by Kastamonu Stream in north and south directions. The traditional texture of the city, which was first known to have been built on the western slopes of the Kastamonu Stream, is located on the slopes which is more steep than partly flat areas on either side of the stream.

Kastamonu contains texts and structures starting from the Roman period, which are important items for the urban identity of the Byzantine, Seljuk, Ottoman and Republican periods. Despite the fact that it was city center after republican period, since the economy was based on agriculture and industrialization did not take place, the development and relative urbanization entered a period of stagnation, In this period the settlement started to lose population due to unemployment. This has caused the original traditional texture to remain intact and has been influential in that Kastamonu has become one of the rare Anatolian cities of today in terms of traditional urban texture, spatial features and urban elements [10].

## **V. URBAN SOCIAL AND ECONOMIC SITUATION**

Kastamonu city has 20 districts, 20 municipalities and 1064 villages. According to 2013 census, population is 368.093. The biggest districts based on population are city center, Tosya and Taskopru, and the smallest district is Agli. Total density of city center to district in terms of total population is % 56.25. Number of people who lives in city center is 207.045, town and subdistrict population is 161.048. Downtown population is 98.456. Population growth rate is % 22.8. Literacy rate based on 6 years and over is % 92.3 for the same year. Commerce places of Kastamonu is generally intensified in city center, Tosya, Taskopru, Arac and Inebolu districts, and industrial development is at quite a low level.

In addition to having forestry product factories in the city, there exist animal fodder factories such as oil cake, corncop; dairy factories and pasteurization enterprises, wheat flour, furniture, textile and bricks factories. Export products from Kastamonu to other cities are mainly lumber, woodwork, chipping-panel, wooden cobble, onion, rice, live animal and animal products (meat, milk and dairy products, leather), bristle string, construction bricks, crystal sugar, residue of crushed seeds, chain, electrical engine and garments [11].

## **VI. CULTURE AND TOURISM**

Kastamonu city enables winter, sea, nature, culture and religious tourism. The city having traditional Turkish mansions which have excessively carried modern times of Ottoman architectural sign a lot is a very rare city in Turkey. Besides of having rich cultural and historical heritage, the city also has magnificent natural beauty. Ilgaz Mountains are used for important winter sports tourism center as well. The mountains have various official and private enterprises that belong to holiday resorts and accomodation centers as well as ski centers. Ilgaz Mountains have been declared as National Heritage Park in 1976, Büyük Hacet Tepesi (Big Necessity Hill) is the highest peak point with 2587 meter. From Kastamonu to Black Sea, there exists 170 km coastal strip. On this coastal strip, there are natural beaches in Cide, Doganyurt, Inebolu, Abana, Bozkurt and Catalzeytin where scuba diving areas and coves (Gideros and Ginolu) enable sea tourism in these districts. Most of the historical structures Kastamonu has incorporate Turkish-Islamic culture and are used for religious purposes. Among focal points of religious tourism in Kastamonu are; Sheik Saban Veli Tomb, Mahmutbey Mosque, Yakupaga Tomb and Benli Sultan. Besides this, Kastamonu city has Valla Canyon, which has 10 km length; Ilgarin Cave, which has 858 m length and 250 meter depth; Ilıca Waterfall, Horma Canyon, Yaralıgoz Passageway. With Ilgaz and Kure Mountains the city has vast and various natural tourism as well [11].

## **VII. SUGGESTION**

Today, the concern about the preservation of historical environments is the most important indicator of the value given to the cultural and historical heritage by countries to their past by being regarded as urban texture in the direction of the needs of the society. The destruction and demolition of historical area is important not only in terms of architecture and aesthetics, but also in destruction of cultural and historical values. For this reason, the necessity of preservation of historical texture as well as the cultural characteristics it carries physical space emerges as a phenomenon that becomes evident in architecture.

Sales and rentings by the families who went outside of the city to rural Kastamonu people have caused significant changes in the use of houses. Houses with difficulties in use due to their large size appear to be rented by more than one family. While tenant families live in difficult economic conditions, they cause severe irreversible damage to the houses. Apart from the deterioration caused by the user, another important issue is to abandon the houses and to leave them to their own fates. Because the houses can not keep up with today's conditions, or because the house owners are leaving them empty with the expectation of demolition, areas where the houses are located become deserted. Other reasons for the disappearance of Kastamonu dwellings are reclamation, modern space demand and especially the destruction of the houses in the city center and transformation of the parcels into parking lot. The process of demolition takes place depending on such factors as the position of the historical city texture, the relation with the city as a whole, the development pressure of the city [12].

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Ahmet Gökdemir. "Investigation Of Structural And Architectural Properties Of Historical Kastamonu Houses." IOSR Journal of Engineering (IOSRJEN) , vol. 07, no. 12, 2017, pp. 69-73.