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An Investigation of the Courtyard Designs of Historical Cumalikizik Houses

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Abstract

This study aimed to investigate the courtyard designs of Cumalıkızık houses, which have been on the UNESCO World Heritage List since 2014 due to their architectural and historical fabric. Traditional houses represent centuries old culture, reflecting the lifestyle of the Turkish society. Nine main parameters were considered in the scope of the study, including the plan types, reinforcement elements, activity elements, flooring elements, water elements, lighting elements, overhead cover elements, courtyard walls, and types of landscape plants. A checklist composed of above parameters was developed in line with the designs of traditional houses in Cumalıkızık village of Bursa. Study method included the development of the check list along with a review of books, magazines, and Google database. On-site observations were made as regards field study and photographing activity. As a result of the field study, particular designs, which were remarkable for the vital activities and the privacy of the users in the courtyards of the Cumalıkızık houses were selected for further investigation. It was seen that the plan schemes of the courtyards and the landscape plant types were shaped in accordance with the topography and climatic conditions. It was understood that the courtyards in the houses played a central role in the buildings in question and in the lives of the users associated with the functionality of these exterior spaces and the circulation between spaces.

Keywords: Historical Cumalıkızık houses; Traditional architecture; Cultural building character; Courtyard space.

"Every house has a courtyard, where one side is sunny, and the other side is shaded throughout the day. Here is the sound of water, colors of flowers, smell of fruits and vegetables." -Cengiz Bektaş

1. Introduction

Courtyards as incorporated into residential building designs have been a frequently used spatial solution in Anatolia and other geographical regions throughout the history (Yalgın, 1993). The courtyards are "(...) the spaces, where certain daily tasks that cannot be performed inside the confined spaces of the house or that require exterior spaces. Although it varies by traditional or modern societies, the courtyard serves as a *recreation* area, where one can relax and unwind for shorter periods of time during the day; a *playground*, where children can have fun under control, without coming into contact with strangers (*children's recreation*); a *viewing area* to check out what is happening on the street; a *social interaction* area where short-term and casual meetings with neighbors are held; a *drying* area for laundry and/or winter food; and an *agricultural production* area, where vegetables and fruits are grown and/or animals are bred/protected for recreational purposes and/or to meet food needs." (Reis, 2003:40.13; Jurkow, 2000:3-7). Developed with inspiration of the lifestyles and culture of various civilizations in different regions of Anatolia, the Turkish houses has gained a unique identity over time. During the Ottoman period, Traditional Turkish House architecture was shaped by the values, norms, economic, and social influence of the time. Religion has been considered one of the most effective factors in shaping the Turkish house design. Under the influence of Islam, residential spaces were divided into separate rooms intended for women and men, called *haremlik* and *selamlık*, respectively. Another example is the fact that the garden walls were raised up to the first-floor level, separating the interiors from the outside, to maintain daily activities in a closed environment. This "privacy" as originated in the introverted lifestyle also played a significant role in interior design (Uysal, 2007). Houses with courtyards as a basic component of traditional architecture, have been an integral part of the urban structure and residential styles, which have changed over time depending upon various factors throughout the history. The courtyards have not followed a specific form, but have been shaped upon cultural interaction among different communities in the geography, in which they are located. In traditional houses, the courtyard is considered an intermediate space that allow transition from the public space (street) to the private space (house) (Bozkurt, S., & Altınçekiç, H. 2013). Sofa, room, *taslık*, and courtyard are considered the most distinctive elements of the traditional Turkish house (Öztank, 2013, p. 46). These houses are designed to help ensure contact with nature. Courtyard was used in the context thereof (Abi, 2020). The courtyard is the most important place in the Turkish house, following the sofa of the house, which brings the household members together. Traditional Turkish house design includes a courtyard. The courtyard is one of the common use areas of the family marked with frequent relationship. Courtyard is isolated from the outside world due to the privacy of the family and the woman. Nevertheless, given that courtyard is the first area used at the entrance to the house and is open to the outside in terms of sound and vision despite physical obstacles, it is considered a semi-private space of the traditional Turkish house (Bozkurt, S., & Altınçekiç, H. 2013). Courtyards were an important building block in the traditional architecture of Cumalıkızık houses as one of the examples of traditional Turkish house

and played an important role in shaping the spaces. Certain traditional houses in Cumalıkızık feature a courtyard surrounded by high stone walls. Double-wing wooden doors with special door knockers separate the street from the semi-private areas, i.e., the courtyards. The courtyard serves as an entrance to another semi-private space called *hayat*, which literally means “life”, where the family’s productive activities are carried out. This semi-enclosed space is surrounded by living spaces on different levels and accommodates various functions, including cooking area, oven, toilet, storage, and stable, where the wooden support poles of the upper floors are visible from *hayat*. Houses without a courtyard also feature a semi-private living area, which are used for the same purpose. The courtyard walls were built using rough ashlar with wooden beams. The courtyard floors are mostly soil or slate, and the stairs are built using wooden materials (Perker, 2002; Akıncıtürk and Perker, 2003). Apart from the house built in a corner of the courtyard, here are also barns, haylofts, and wineries where molasses are made, and rug and cloth weaving workshops associated with the needs and occupations of the residents (Bozkurt, S., & Altınçekiç, H., 2013). Cumalıkızık has architectural value due to its traditional past. The courtyards of these houses convey the architectural traces of a civilization that extends from history to the present day, with its design and cultural norms embedded in its perception of space. Accordingly, courtyards have become an important indicator of the user and traditional housing. Cumalıkızık courtyards cannot be merely described as primitive structures using local materials and the building techniques of the time. They maintain a central position in the lives of their users and has become one of the determinant factors in shaping the character of these houses. Five buildings were selected from Bursa Cumalıkızık village for the purposes of this study, which met the traditional Turkish house criteria. The buildings in question were reviewed under nine parameters (plan types, reinforcement elements, activity elements, floor elements, water elements, lighting elements, cover elements, courtyard walls, and landscape plant types) accompanied by on-site observation and photography.

Cumalıkızık Houses

Cumalıkızık village is one of the iconic locations featuring residential buildings, which bear traces of the Ottoman Empire. These houses are witnesses of the architecture, values and norms of their respective period. As in other Turkish cities, Cumalıkızık is a settlement center shaped vis-a-vis the topography and climatic conditions, with richly chamfered corner turns and narrow stone-paved streets surrounded by adjacent houses (Polat, 1991). These houses reflect the features of traditional Turkish houses with external sofas, but the size of the land and the configuration of the rooms vary based on the economic and life behaviors of the family. The houses in question were generally designed as 2- and 3-floor buildings. Ground floor consists of a spatial component closed on three sides, where the floor of the upper floor is carried by pillars, and one side overlooks the courtyard. Connection to the upper floors is provided by the staircase located in one corner of this space. These places were named as *taslik*, *hayat*, or *ic oylum* in the settlement. This floor features certain sections, including storage for agricultural utilities, stables, and toilets. Household members’ time is mostly spent here. This space meets a number of needs, including cooking, making bread, and laundry work. The stoves are located in one corner of this space. This is the most frequently used section of the house, especially during the harvest time.

This is where the crops are temporarily store after the harvest. Fuelwood is stored for the winter season in a corner of this space. Houses with high floor height also include half-story units. Materials intended for prolonged storage are kept there. Upper Floor: This floor is reserved for daily life activities, and it is shaped differently compared to the lower floor due to its functions and consists of living room and sofa units (Polat, 1991). Sofa sizes vary by the number and shape of rooms. In traditional style, houses feature external sofas. The parts of the sofa other than circulation, which provides passage between rooms, contain functions such as *sekillik*, i.e., *seating groups*, kitchen niches and *gusülhane* rooms, in certain houses. Spatially, the rooms reflect traditional the Turkish house characteristics. Various activities, including sitting, lying, and dining take place in the same place. Marked with functional differences, these units can be used for different purposes varying by seasons. In the Cumalıkızık region, the middle floor in three-story houses and a room that can be easily heated in two-story houses are used during the winter period. The rooms are directed to the street according to their cantilever (Polat, 1991). The relationship between street and space is established based upon this behavior. Room sizes are generally not very different and interior layouts are similar. Nevertheless, the main room was designed with larger dimensions. (Polat,1991). Cumalıkızık houses were built with local materials, usually wood, adobe, or stone. It is characterized by cantilevers, wide eaves, and Turkish style tiles. As in traditional Turkish houses, the architectural design of these houses considered the climatic conditions, and the high courtyard walls in their courtyards were formed based on spatial constraints to create a refreshing atmosphere.

Cumalıkızık Courtyards

Certain traditional houses in Cumalıkızık feature a courtyard surrounded by high stone walls. Double-wing wooden doors with special door knockers separate the street from the semi-private areas, i.e., the courtyards. The courtyard serves as an entrance to another semi-private space called *hayat*, which literally means “life”, where the family's productive activities are carried out the relationship between street and space is established. The typologies of these courtyards are in Table 1; in Figures CE1, CE2, CE3, CE4, and CE5. This semi-enclosed space is surrounded by living spaces on different levels and accommodates various functions, including cooking area, oven, toilet, storage, and stable, where the wooden support poles of the upper floors are visible from *hayat*. Houses without a courtyard also feature a semi-private living area, which are used for the same purpose. The courtyard walls were built using rough ashlar with wooden beams. The courtyard floors were mostly built with soil or slate, and the stairs were made of wood (Perker, 2002; Akıncıtürk and Perker, 2003). The outer doors of Cumalıkızık traditional wooden houses open to the courtyard or garden (Perker, 2004). Upon a review of the cultural plantation traits of the area, the courtyards of the houses in Cumalıkızık generally open to a garden. All houses have gardens and fruit trees in their gardens. Walnuts, chestnuts, strawberries, peaches, cherries, plums, apples and pears are grown in the gardens of traditional houses in the area. Besides, the species in this area include *Buxus sempervirens*, *Hibiscus syriacus*, *Thuja orientalis*, and *Rosa* sp. (Erdem, 2012). Albeit rarely, the *Baş Oda* (Main Room), which is frequently placed on the upper floor, can also be located in the courtyard plan, as in Figure 1, and these are generally places where male guests are hosted.

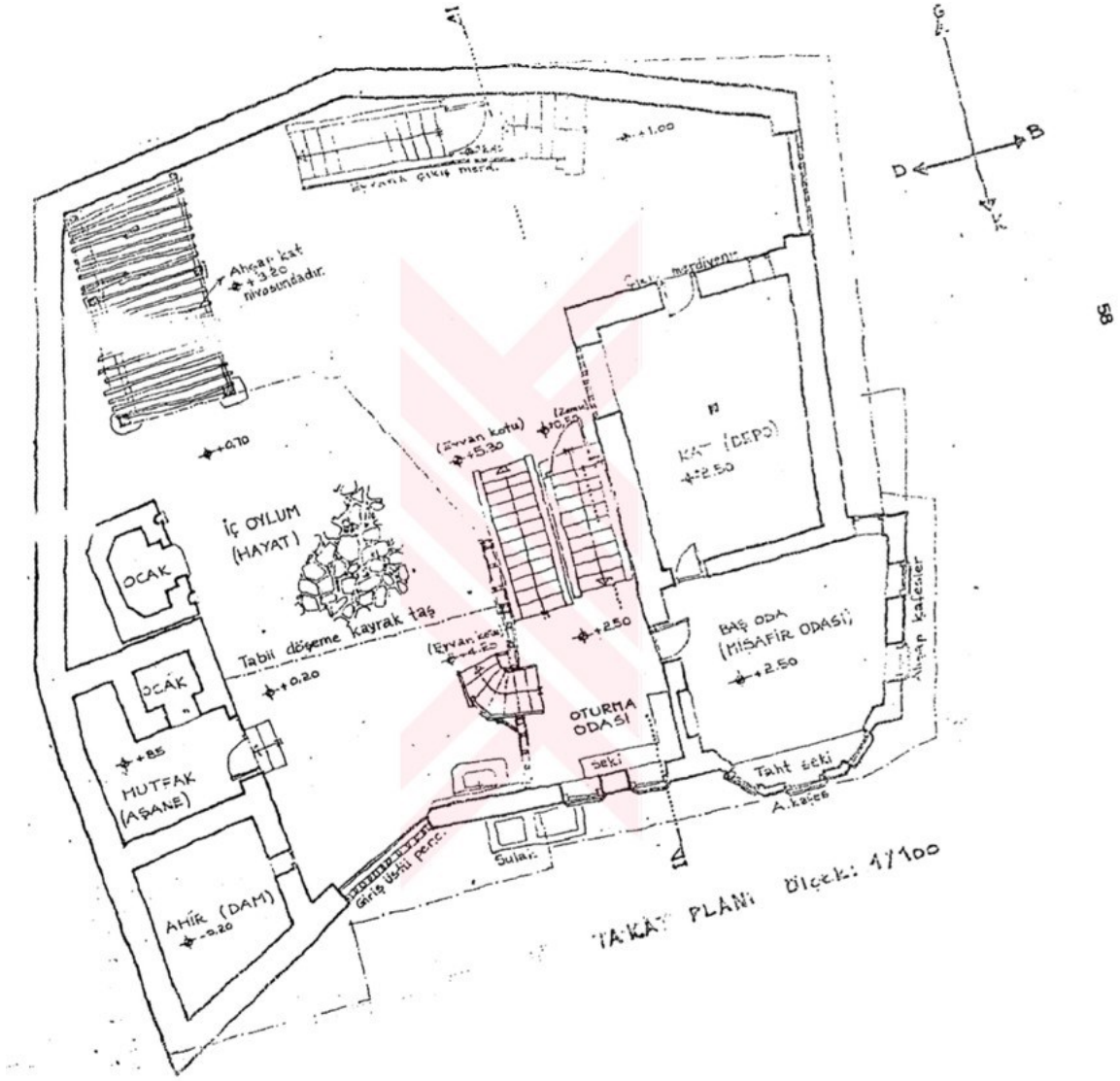


Figure 1: Polat, S. (1991) Cumalıkızık köyü tarihsel değerlerin korunması üzerine araştırma (An Investigation of the preservation of historical values in Cumalıkızık village / [Published Master's Thesis]. Mimar Sinan Fine Arts University.

FIGURE 2: EXAMPLES OF COURTYARD EQUIPMENT AND ACTIVITY ELEMENTS




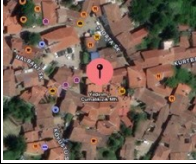

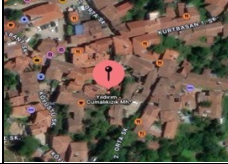






Figure 2: Photo Credit: Göksu Koray's personal archive.

2.METHOD

2.1.Field of study

The courtyards of traditional houses in the Cumalıkızık village which was founded in the 17th century in Bursa, a city which served as the capital of the Ottoman Empire, were considered suitable as a study area because of their architectural design characteristics. Nevertheless, certain of the buildings here were chosen to be investigated as they preserved their structural integrity until today. Not all the houses in Cumalıkızık village provide access to their courtyards. Therefore, only five examples, which gave the opportunity of on-site discovery and interview with users were selected. The relevant information as to the courtyard space with traditional building character was collected by means of field study and observation. The structural identity of the courtyards in these houses are given Table 1.

Table 1. Study Areas Characteristics - 1

Code of the Building	CE1	CE2	CE3	CE4	CE5
Location					
Coordinates	40.17457° N 29.17212° E	40.17456° N 29.17236° E	40.17462° N 29.17252° E	40.17428° N 29.17256° E	40.17406° N 29.17190° E
Photographs*					

*Photo Credit: Göksu Koray's personal archive.

2.2. Method of the Study

For the purposes of this study, the names of the selected buildings are hidden to meet ethical standards and coded as CE1, CE2, CE3, CE4, and CE5. On-site observations were made in Cumalıkızık village of Bursa for field study and photographs. Information about the parameters in the formation of traditional building type characters was accessed from the Google database for research purposes under the present study.

2.3. Analysis Method

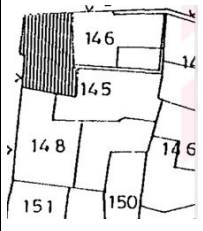
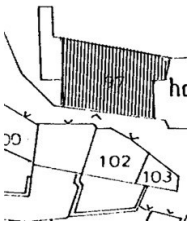
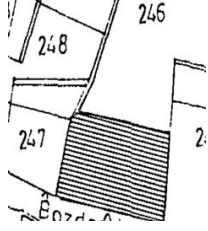
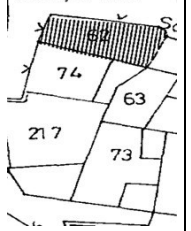
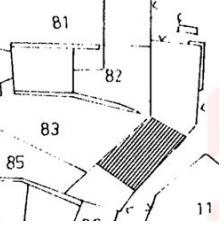
The checklist parameters in selected areas were analyzed in Table 2 with discovery about their current status.

3. RESULTS

It was seen as a result of the study that the courtyards followed similar design criteria. On the other hand CE2 has a stove niche, unlike others, as regards the equipment elements; CE4, has wheat grinding equipment as regards the activity areas; CE3 has a square-shaped fountain in the courtyard as regards water elements; CE3 a space to receive natural light and illuminate the courtyard, unlike the others, featuring a window opening on the entrance door; there are no wooden floor beams but only eaves hipped roofs in the courtyards of the buildings coded as CE1 and CE3; there are horizontal wooden beams in the courtyard walls in CE3 and CE5 courtyards;

CE3 has chestnut trees, where and CE5 has only apple trees as regards landscape plant diversity.

Table 2. Study Area Results

CUMALIKIZIK HOUSES	CE1	CE2	CE3	CE4	CE5
Courtyard Form*					
Equipment Elements	Niches Couch Dinner Table	Stove-side niche Couch Dinner Table	Niches Couch Dinner Table	Niches Couch Dinner Table	Niches Couch Dinner Table
Activity Elements	Bread Oven/Stove	Bread Oven/Stove	Bread Oven/Stove	Bread Oven/Stove and Wheat grinding equipment	Bread Oven/Stove
Flooring Elements	Slate	Slate	Slate	Slate	Slate
Water Elements	Fountain (Religious ritual and hygiene)	Fountain (Religious ritual and hygiene)	Square-shaped fountain	Fountain (Religious ritual and hygiene)	Fountain (Religious ritual and hygiene)
Lighting Elements	Natural Light	Natural Light	Natural Light and wooden joinery window opening above the entrance door	Natural Light	Natural Light
Top Covering Elements	Hipped Roof with Wide Eaves	Wooden Floor Beams and G. Eaves Hipped Roof	G.Eaves Hipped Roof	Wooden Floor Beams and G. Eaves Hipped Roof	Wooden Floor Beams and G. Eaves Hipped Roof
Courtyard Walls	Natural Stone	Natural Stone	Horizontal wooden beams and stone	Natural Stone	Horizontal wooden beams and Natural Stone
Landscape Plant Varieties	Potted Plants, Plum, Peach	Potted Plants, Chestnut, Plum, Peach	Potted Plants, Chestnut, Plum, Walnut	Potted Plants, Walnuts, Plums, Peach	Potted Plants, Apple, Peach, Walnut

*Polat, S. (1991) Cumalıkızık köyü tarihsel değerlerin korunması üzerine araştırma (An Investigation on the preservation of historical values in Cumalıkızık village) / [Published Master's Thesis]. Mimar Sinan Fine Arts University.

4.DISCUSSION

Founded on the North-West foothills of Uludağ, Bursa as the first capital of the Ottoman Empire, and Cumalıkızık, which was founded as an Ottoman foundation village during the same period were registered on the UNESCO World Heritage List in 2014. Included in the World Heritage List in the cultural category, "Bursa and Cumalıkızık: Birth of the Ottoman Empire" World Heritage Site consists of five components: Khans Region including Orhangazi Complex and its surroundings, Hüdavendigar (Murad I) Complex, Yıldırım (Bayezid I) Complex, Yeşil (Mehmed I) Complex, Muradiye (Murad II) Complex, and Cumalıkızık village (URL-1). Today, sadly, Cumalıkızık houses and courtyards were destroyed before included in the UNESCO list and have undergone structural changes due to lack of healthy improvements. Nevertheless, it is understood that the village included in this list has preserved its assets. It was seen that there was a limited number of houses and courtyards that preserved their historical fabric. All the buildings are introvert in Bursa's Cumalıkızık village. This is associated with the privacy originated in Islamic values in lifestyle and its reflection on social life. Bay windows, seen in almost all houses, enable women, whose contact with the outside world is limited due to the social structure, to observe the street comfortably, even from inside the house. The height of walls is considered a proof of the fact that the houses in the village are designed introvertly. The relatively high walls were intended to hide the interior life from those passing on the street and thus provide privacy (Dostoğlu, 2009). The courtyards of Cumalıkızık houses have served as a bridge to provide us with information about Turkish houses from the history to the present day. The courtyards of these houses are not merely spatial units but are also a cultural commodity that can be traditionally transferred to the future. It was seen that the closed outer sofa, which is among the plan typology types referred by Sedat Hakkı Eldem with regard to Turkish houses, is distinctive and most widely used plan type in Cumalıkızık houses. Furthermore, the equipment elements seen in the courtyards are indicative of user activities including cooking and socialization, etc. in the courtyards. Slate is frequently used in flooring elements, as shown in Table 2. The reason is that Slate as a type of sedimentary stone is very resistant to abrasion, weather conditions, and acids (Çakır, 2012). Slate was the choice of material due to the fact that courtyards were placed outdoors, and the climatic conditions should have been taken into consideration. These stones were not only used as flooring materials, but also decorative purposes such as wall covering, barbecue, and fireplace (Çakır, 2012). The water elements available in the courtyards of Cumalıkızık houses were designed to ensure hygiene in the daily life of the household and help fulfill religious rituals. It was seen from examples in question that the courtyard fountains in the study, which did not survive until today, also had this purpose, but the necessary protection could not have been provided. It is understood that only one water element has survived to the present day where it has not preserved its structural integrity. Courtyard walls with a height of 3.10-3.20 cm reflect the family's lifestyle and sense of privacy. Lighting is provided partly from the floor space and partly from the window opening on the courtyard entrance door with natural light. The courtyard top cover elements indicated that the houses of the period and the region used wide eaves and Turkish style tiles, but the tops of the courtyards were generally left open. It was understood that some examples were designed to create a canopy with wooden beams on their axis. Consistent with traditional Turkish houses, there was prevalent use of natural stone in the lateral planes of the courtyards of these houses. Various types of landscaping, which are complementary and atmosphere-enriching elements, are frequently seen in the courtyards of these houses. Plant species compliant with the climatic conditions of the study were used.

5.CONCLUSION

As a result of the field study, particular designs, which were remarkable for the vital activities and the privacy of the users in the courtyards of the Cumalıkızık houses were selected for further investigation. In this context, it was seen that the height of the courtyard walls was one of the architectural elements that shaped the building character of Cumalıkızık houses. It was seen that the plan schemes of the courtyards and the landscape plant types were shaped in accordance with the topography and climatic conditions. The existence of common traits of the courtyards in the sample areas reflecting similar design criteria was also identified. On the other hand, CE3 featured a number of differences compared to the others. It was understood that the courtyards in the houses played a central role in the buildings in question and in the lives of the users associated with the functionality of these exterior spaces and the circulation between spaces.

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