

Sustainability of Traditional Houses: Two Mansions Protected Through Adaptive Reuse in Yozgat

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ABSTRACT

Traditional houses are not used in accordance with their original functions and gradually disappear due to reasons such as social changes and lack of awareness about protection and policies. Accepted locally and globally as a key concept that aims to maintain societies in the future, sustainability supports as well the identification of structures with their social and cultural dimensions. This study aims at examining the spatial and structural characteristics of Nizamoğlu and Hayri İnal mansions that are adaptively reused and that need to be conveyed to future generations and providing recommendations for preserving mansions and ensuring socio-cultural sustainability.

Key words: Traditional houses, socio-cultural sustainability, adaptive reuse, Yozgat, mansion

1. INTRODUCTION

Culture, which could be defined as the accumulation of the material and moral values of societies throughout a historical process, reflects the knowledge, experience, history, lifestyle and identity of a society. The conservation and transmission of cultural heritage and cultural values to future generations is a social duty. Urbanization, population growth, and changes in the social structure which alters lifestyles change the structures that constitute cultural heritage and witness

the past, and consequently, the built environment composed by these structures. This process changing the physical structure of cities makes it difficult to preserve and use the functions and original characteristics of an important element of Turkish cultural heritage, traditional houses, and accordingly these houses cannot survive as a single building or constitute a coherent urban fabric. In recent years, sustainability as a key concept accepted locally and globally which aims at maintaining societies in the

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future and conveying the current resources to future generations [1-4] advocates that structures should be identified with their ecological, economic, social and cultural dimensions [5, 6]. The ecological, economic, social and cultural dimensions of sustainability interact, complement and define one another [7, 8]. In order to fulfill all dimensions of sustainability and to create livable environments, it is necessary to restructure the ecological, economic, social and cultural systems. In this respect, these are principles that shape strategies regarding the protection of resources and ecosystem (ecological sustainability), the long-term availability of resources and their costs to be kept at a low level (economic sustainability) and the preservation of human health, provision of comfort and conservation of social and cultural values (social and cultural sustainability). Ensuring social and cultural continuity and conveying cultural accumulation to future generations depends on maintaining the signs and symbols of the past throughout generations [9].

Structures that are shaped by social life and structure are as well influenced by changes in lifestyles. This interaction renders it difficult to preserve and sustain traditional houses that have lost their original functions and that cannot provide the comfort conditions and usability in today's terms. The lack of awareness of conservation and preservation policies makes it almost impossible to preserve and maintain these structures with their original functions that make up cultural heritage and witness history, and obsolete buildings are faced with the threat of destruction in this process. Recently, the protectionist approach to preservation, which adopts the protection of singular buildings in isolation from their environment. The new understanding of preservation instead supports the preservation of the structures with historical and traditional characteristics as a whole including all the natural and artificial elements that constitute the historical fabric and environments and transmitting them to future generations [10]. In order to do so, it is necessary to document the textual and visual information about the architectural form, plan schemes, construction systems and materials, and to determine and evaluate policies about preservation. The level of preservation of traditional structures and urban fabric composed of these structures is an indication of not only social, political, cultural and economic characteristics of societies but also their level of development [11-13]. Traditional houses reflect the identity, culture and lifestyle of their users. In terms of sustainability, it is observed that these buildings are in compliance with sustainable design principles such as compatibility with physical environment like the site and direction selection, location, topography, landscape, climate, and prevailing wind, compatibility with environment and nature, construction with local, natural and environmentally-friendly materials, regarding human health, livability and usability. Despite these characteristics, traditional houses fail to provide the modern comfort conditions which in turn make it difficult to use them. Thus, it is necessary to adapt these buildings to modern conditions without the loss of their spatial characteristics and to adopt a preservation

approach that underlines the provision of maintenance and repairs through adaptive reuse.

Adaptive reuse of the buildings to be preserved through social consciousness and responsibility enables both social and cultural sustainability and conservation of resources. Traditional houses that have survived throughout history are informative indicators of social and cultural lives of societies. In this respect, strategies should be developed to use traditional houses with their original functions or functions that are compatible with the present needs, to protect resources and socio-cultural values, to transmit the traditional way of life to future generations, and to ensure social and cultural sustainability [14]. The appropriateness of the function to be assigned to the structure to be preserved and users' adopting it contribute to its preservation as well as to ensuring sustainability and livability. In order for the structure to serve the society and to survive with its original form, it is necessary to reinforce it with appropriate functions [15]. In adaptive reuse of buildings, it is important for the continuity of the function that it responds to user requirements and spatial performances provide user satisfaction [16].

In recent years, the practice of adaptive reuse is a rather commonplace method of preservation to adapt traditional houses to new lifestyles and contemporary uses. Assigning buildings different functions than their original functions is a conservation tool used since ancient times [17]. In this process, most of the houses are transformed into passive uses such as museums or cultural centers in order to document the cultural, social and spatial changes, transmit the past way of life to future generations, to change the spatial structure and to ensure the continuity of use. The approach of adaptive reuse, instead, allows the exhibition of the traditional houses that cannot sustain their original functions together with the past lifestyle in them and the transmission and preservation of social and cultural footprints and local identity that constitutes environmental values to future generations.

In Yozgat, the traditional houses could not be preserved within an urban fabric, and few mansions were adaptively reused for preservation purposes. This study aims at examining the spatial and structural characteristics of Nizamoglu and Hayri Inal mansions that are currently used as museum and cultural center in Yozgat and providing suggestions for preserving them and ensuring their social and cultural sustainability. This study emphasizes the necessity to perceive and preserve these mansions as a whole and the adaptive reuse of them in accordance with changing social lifestyle and emerging needs.

2. HISTORICAL AND SPATIAL STRUCTURE OF YOZGAT

Yozgat is one of Anatolia's oldest and most important centers of settlement. The city was under the rule of the Hittites, Phrygians, Cimmerians, Persians, the Kingdom of Cappadocia, Galatians, East Romans, Byzantines, Seljuks, Mongols, and the Ottomans. In addition, there are several settlements belonging to these civilizations in the city and its environs, including the capitals of the Hittites, Galatians, Medes, and the Romans. The city is

located at an important crossroads. The King's Road during Roman times, the Silk Road during Seljuk rule and Ordu Road in the Ottoman period passes through Yozgat [18].

Resembling a small village without a particular center in the 16th century, the area became a major city with the efforts of the Çapanoğulları dynasty which settled in the region by mid-17th century. The city evolved into its current form to a great extent towards the end of the 17th century under the Çapanoğulları rule. The first steps towards developing the city were taken in the 18th century when it faced population growth with Turkish and non-Muslim families coming from the surrounding areas and the development of trade and economy [18]. The roads and streets of the city were shaped under the influence of Turkish-Islamic culture and the lifestyle of the people of Anatolia. In the 19th century, travelers who visited the city shed light on the economy, urban structure and social life of Yozgat. Following Evliya Çelebi, Mac Donald Kinnier and Charles Texier portray the city through the glorious palace, gardens and mansions of the Çapanoğulları, state that the urban population was composed of Muslims, Christians, Armenians and Greeks and that there was no difference between the buildings belonging to Muslims and Christians. Spatial structure in the Muslim and non-Muslim houses have the same characters and it can be seen as an indication of Muslim and non-Muslim communities live in harmony for many years together. The travelers who visited the city point out the presence of a unique aristocracy in the city with Çapanoğlu Palace and several mansions. It could be stated that Yozgat had a vibrant commercial life and economy and a vivid social life [18]. At the beginning of the 20th century, the city started to develop around the current Çapanoğlu Mosque where several shops and inns were built, the Çapanoğlu Bath and Tol Bazaar being the most prominent ones [19]. With the construction of the Demirli Madrasah in 1753 where currently the Government House is located [20] and the erection of the clock tower in front of the library and the madrasah, the city continued to grow around the mosque and the madrasah. The area of the clock tower was transformed into a square and city center in the Republican period and the city grew with neighborhoods around the Çapanoğlu Mosque and its environs.

3. ADAPTIVE REUSE OF TWO MANSIONS IN YOZGAT

In Yozgat, a city that remained relatively unaffected by population growth in Anatolia, urbanization and development, the centuries-old traditional houses of the Ottoman period could not be preserved as an urban fabric due to unregulated land development. Dense development is observed in the location of these structures that were demolished or burnt down with the aim of increasing rent. Only a few of the several mansions in the city center that existed in the 18th century, as mentioned by the travelers, survived to date [21]. Most of the mansions that are considered unique examples of civil architecture and home to extended families became obsolete as they cannot meet the current comfort standards, and the ones that are below the contemporary standards and could not be preserved were demolished. A small number of mansions that survived to date are registered and protected by the Ministry of Culture. The mansions examined in this study, Nizamoğlu and Hayri İnal mansions, are examples of adaptive used.

In terms of size, form, load-bearing systems, indoor and outdoor use and decoration, it is seen that traditional houses reflect the socio-economic status and lifestyle of their users. In this respect, the traditional Yozgat mansions, shaped by a deep-rooted experience and inhabited by extended families, are like documents that portray the social, cultural and economic structure of the period in which they were constructed. Nizamoğlu, Hayri İnal, Karşlıoğlu, Ozanlar, Yeşilkaya, Kazım Dönmez, Divanlıoğlu, Ömer Dündar and Koldemir mansions could be considered the mansions that were preserved until the present day. These mansions are located around the Çapanoğlu Mosque, the center of the city, like the rest of the mansions that could not be preserved. Nizamoğlu and Hayri İnal mansions are so close to the abovementioned mansions that they could form a group. However, due to the dense housing pattern as a result of the unregulated land development in the city, it is not possible to perceive the mansions as an integrated urban fabric. Figure 1 demonstrates the location of Hayri İnal and Nizamoğlu mansions and the other mansions located around these two and their respective locations [22].

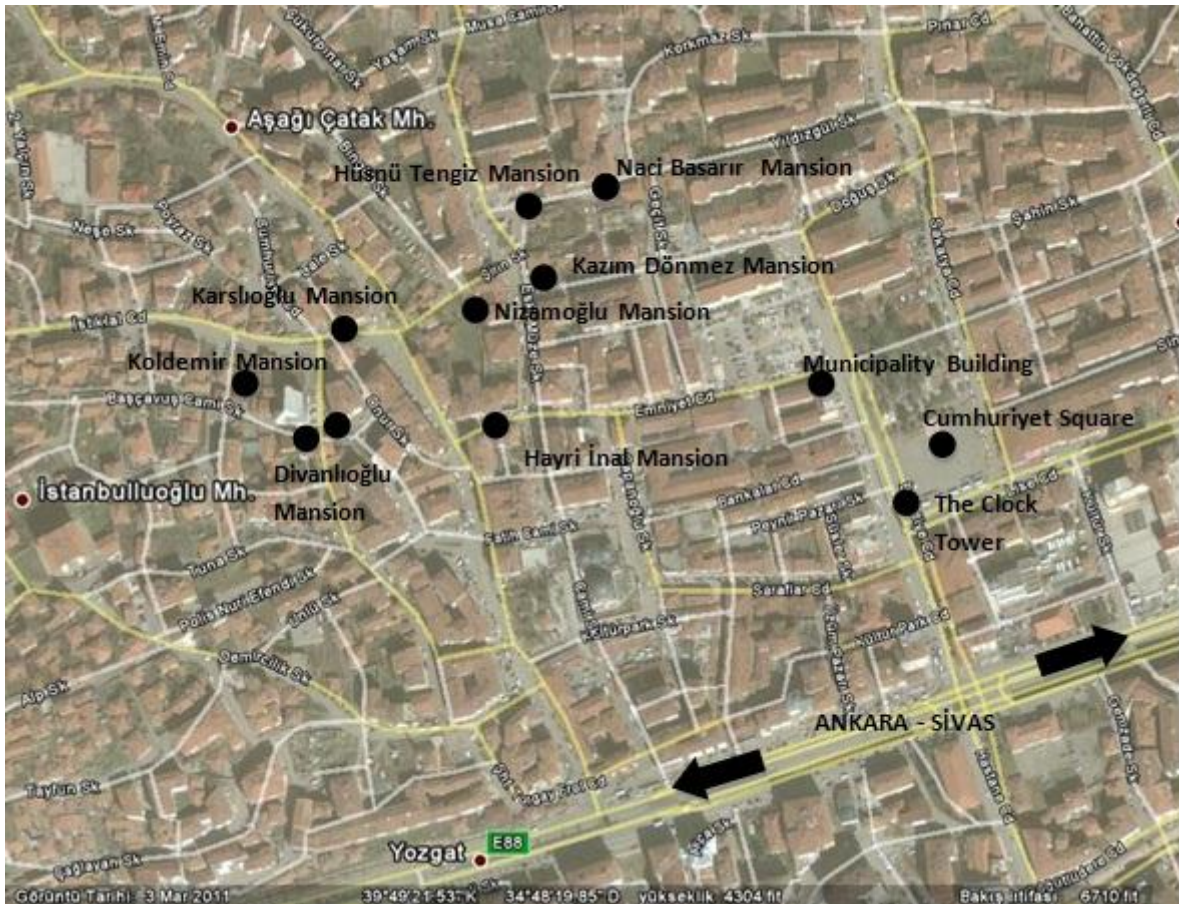


Figure 1. Locations of Yozgat Mansions in the city and with respect to each other [22]

3.1. Spatial Structure of the Traditional Yozgat Houses

It is observed that the traditional Yozgat houses are shaped like the traditional Turkish house shaped by the transmission of the experiences related to housing and the conservation of cultural continuity, with a unique spatial structure. Like the traditional Turkish house, Yozgat houses were diversified and developed according to the physical environment features such as the topography of the area, climate and the prevailing wind, available material, construction techniques, and the lifestyles and level of socio-economic of the users. Despite the societal differentiation between the Muslim and non-Muslim populations, the houses of both groups displays similarity as they were built simultaneously in the same geography. It could be explained by the fact that they were built by the same designers and craftsmen who had similar approaches.

3.1.1. Exterior space

The exterior of the traditional house is generally shaped by a public space like a religious center, shops and bazaar, the streets surrounding the square, and the neighborhoods that develop around them. In Yozgat, the traditional houses that are gathered around the Çapanoğlu Mosque are located on narrow and organic streets, within a garden, as detached buildings compatible with the topographic structure. However,

the roads constructed after the changes in city zoning principles are at right angles and larger than the streets where the traditional houses are located. The parcels of the houses, garden walls and ground floors are observed to be in accordance with the route of the streets that developed organically. The outdoor varies according to the presence or absence of a garden, attached or detached building order and whether the house has a façade facing the street or the garden. The garden is surrounded by high walls in order to ensure privacy. Every space and every element of the Turkish house is designed functionally and ergonomically in accordance with the user's lifestyle and practices. The high garden walls of the houses with gardens in Yozgat have a double-leaf entrance gate. The entrance gates usually have eaves on the top. The width of the gate is designed according to the user's measurements just like the width of the street.

3.1.2. Load-bearing System

In general, wooden frames and mixed structural systems such as stone masonry with wood frame are used in the traditional Yozgat houses. Houses made of stone, brick and adobe brick masonry are almost nonexistent. Stone is generally used in the ground floor and wood in the upper floors. Stone, brick and adobe brick are used as the filling material. As in the Turkish house, the load-bearing system of the structure determines the dimensions and form of the rooms, structural elements

such as windows and doors and the interior layout. The overhangs that are part of the load-bearing system are embedded in the flooring extensions, fixed on the beams on the walls or by overlapping. In the ground floors, wood flooring is applied by nailing it on the timber carriers placed on compacted soil. In the upper floors, the wood base of the pavement is covered by wood.

3.1.3. Plan Characteristics

The size and form of the houses that change depending on the characteristics of the user are like documents that provide information about the user's identity and life style. The Yozgat houses are usually two or three storey. In multi-storey houses, basement floors are observed. The basement is partial and is usually used as storage, pantry, woodshed, laundry, bath and stony ground. Unlike the traditional Turkish house, it is observed that the Yozgat houses do not have a particular living floor, as there is no special distinction between the elements of spatial elements of the two floors and the upper and lower floors have the same spatial structure. However, the houses are planned in a manner that is suitable for summer and winter in Yozgat, a city with a continental climate with significant temperature differences between summer and winter and day and night. The large stone-walled ground floor or intermediate floor is more suitable for wintertime, whereas the upper floors with more windows where lighter and thinner materials are used is suitable for use in summer [23]. The plan schemes of the houses vary according to the positions of the rooms and the hall (sofa). The plan scheme generally changes according to the numbers and positions of rooms with the respect to the hall for the rooms that have direct access to it. Although there are examples of outer hall where the hall is on the side of houses, plan types with inner hall located in the middle of the room due to the climate or derivatives of this plan, such as *karniyarık*, and corner hall, are commonplace. Forming a common space and the central space for the family, the hall is generally large and spectacular. There are examples of varying hall in the upper floor plan schemes where the position and size of the hall aim at establishing a relationship with the street and directing more rooms to the street. In accordance with the traditional house, the rooms are simple or spectacular depending on the user's age and significance within the family. It is observed in some examples of preserved houses that some rooms are decorated with sumptuous wood embroidery and paintings. Providing the relation between the floors in a house, the stairs are located in front of the hall and next to the rooms. The doors of the rooms are generally single-leaf and lower than other doors and they open to the hall with a certain angle for the purpose of privacy.

3.1.4. Façade Characteristics

Similar to the traditional Turkish house, the configuration of the façade in Yozgat houses varies depending on the climatic characteristics of the region, load-bearing system and construction materials, planning scheme and the topography of the land. The configuration of the façade of the house is the reflection the plan to the outer side. The elements that contribute

to the characteristics of the façade are space-saving and aesthetic overhangs, windows that are shaped according to the room and the hall and the Turkish style tiled roof with broad-eaves formed according to the overhangs.

It is observed in the upper floor used as living space that rooms overhang in a manner depending or not on the wall of the garden to face one or two sides of the street in order to obtain a larger space with a proper geometry, to expand the field of view and to make use of the scenery. The overhangs are generally formed on the side or rear façades facing the. The front façade overlooking the garden is without an overhang. The rear façades where the overhangs are rarely used are simpler than the front façades. The overhangs formed by expanding or overlapping the elements bearing the flooring of the upper floor are flat, triangular or rectangular according to the relationship of the overhang with the façade line, whether they are parallel to or at an angle with the façade. While the lower part of some of the overhangs is covered with wood, some are left open. However, the most common usage is to support the overhang with wood or stone buttresses. The buttresses that carry the overhangs are plain or decorated. The position, number and shape of the buttresses change according to the length and width of the overhang. The buttresses both transfer the load of the overhangs to the wall as a part of the load-bearing system and at the same time increase the visual and aesthetic value of the house. The façade gains dynamism with the balconies and overhangs in the upper floors. It is observed that the balconies that face the garden are generally on the south side of the house, whereas the overhangs are used in the middle, on one side, on both sides and at the corner of the façades or all along them.

Similar to the Turkish houses of the late Ottoman period, the windows of the hall are large and high in Yozgat houses. It is common to use wooden moldings at floor level and wooden pillars at the corners in the façades where the structure is concealed behind the plaster. The proportions, frequency and repetition of the wooden windows shaped in accordance with the function of the space bring about order and harmony in the façades. Parallel to the plan characteristics, the same proportion and form of the windows are repeated in the ground and upper floor. The proportion of the vertical windows are often $\frac{1}{2}$. The windows are sash windows or wing type. The examples of double and triple-grouped windows over the room and the hall are predominant. On the edges of the windows, wooden frame and jambs are used. It is observed that the jambs that surround three or four edges of the windows vary so as to form flat, circular or crown-like shapes in the upper and lower edges of the windows. While the wooden lattice, which is a characteristic of the traditional Turkish house, is not used in the façades, the use of shutters is seen in the ground and upper floor windows. In the examples without shutters or lattices, the ground floor windows are barred for security reasons.

The houses are often with a hipped roof and the roofing tile is pantile. As it is the case for the 19th century Turkish houses, it is seen in the traditional Yozgat

houses that the width of the eaves is little and the underside of the rafter is covered with wood. There are as well examples where the eaves form coves and juts by following the façade line or pass all the façade straight.

3.1.5. Interior Space

The interior features of the traditional Yozgat houses show all the interior space characteristics of the Turkish house. Structural elements such as wood ceiling, floor, door, window, cabinet and cupboard are used in the house. The richness of wooden craft and decoration vary according to the characteristics of the user. Despite the simplicity of the façade, decoration is common in halls and rooms. An important element of the interior spaces of the Turkish (late Ottoman) houses, the ceiling has wooden cores with paneled and floral motifs or geometrically formed. Hand-carved and wooden ornaments are predominant in the ceilings of the houses [21]. In addition to the ceiling decorations, the cabinet and cupboard are the other elements enriching and defining the interior space and giving it an identity. In the rooms, in front of the window, there is a divan, locally called *makat*, in one or two directions and there is a cupboard in the opposite direction to the divan.

The spatial characteristics of the houses that are adaptively reused in Yozgat are largely preserved. The mansions examined in this study, Nizamoğlu Mansion and Hayri İnal Mansion, are used as a museum and a cultural center, respectively. Late Ottoman period, reflecting the spatial characteristics of the exteriors of this mansion, construction methods, plan and façade features and interiors shows similarities.

3.2. Nizamoğlu and Hayri İnal Mansions

Reflecting the general characteristics of the Turkish house, Nizamoğlu Mansion was built in the late Ottoman period. Used as a monopoly store and arts school for girls, the mansion was registered in 1975 and restored keeping its original form. Nizamoğlu Mansion has been used as a museum of ethnography since 1985. Visited by many people every year and exhibiting objects that belong to the culture of Yozgat, the mansion is preserved as it is actively used. Handed over to the treasury by its original owners, Vasaki and Joannaki, the mansion became first the property of

Abdullah's daughter Fatma Hanım in 1875 and then Nizamzade Ali Efendi, and thus called Nizamoğlu Mansion after him. The presence of a picture dated 1871 in a room towards the southwest of the mansion indicates that the mansion was built before that date [18, 21, 24]. Lifestyle of owners or users' of the houses, socio-economic status, religious beliefs, family structure, society, and culture briefly; can differentiate spatial structure [25, 26]. Muslim and non-Muslim societies [18] that living together when the period of the Nizamoğlu Mansion is built, despite their differences lifestyle, religious beliefs and family structure, living together naturally as a result of cross-cultural interaction in are thought to be. About the cultures of different ethnic groups-on the spatial structure interaction studies examining the spatial structure usually indicates that religious belief and gender-related changes [27]. Therefore, can be said that house is as an object that enables interaction users and owners of houses and, on account of communities closer together and thus, inclusion and culture [28].

Built in 1880 during the late Ottoman period, Hayri İnal Mansion as well reflects the general characteristics of the Turkish house. In 1979, the mansion belonging to Hayri İnal was registered and restored in accordance with its original form. In 2007, the Municipality of Yozgat became the owner of the mansion which is currently used as a cultural center. Figure 2 shows the state of Nizamoğlu Mansion in the 1970s and of Hayri İnal Mansion in 2007 [29].



Figure 2. Nizamoğlu and Hayri İnal Mansions [29]

3.2.1. Exterior Space

The mansions examined in this study are located in the city center, close to Republican Square, Clock Tower, and the Çapanoğlu Mosque and within the boundaries of İstanbulluoğlu Neighborhood. Nizamoğlu and Hayri İnal mansions were built on a rectangular parcel. The roads surrounding the mansions were expanded in the mid-1980s and the original street fabric was ruined. The land of the mansions is inclined in the direction of south-east. The two-storey mansions both have a basement. The basements emerged in the direction of inclination. Nizamoğlu Mansion has a narrow garden in the direction of the northwest and southwest and a large garden in a southeasterly direction. The garden wall, which was constructed high to provide privacy, was later heightened in the northwest and northeast with iron railings due to security reasons. The garden is accessible from the upper and lower level on the Cami Street in the northeast. It is known that there is narrow

door which used to be large in the year the mansion was registered at the lower level except main door. This door was closed during the restoration of the mansion. The entrance to the garden from the upper level is through a large and arched gate made of yellow ashlars. The wooden, double-leaf entrance door is original. The entrance to the mansion is from the southeast and northwest directions. The gradual garden wall built with rubble stone in the southeast direction was left in its natural state outside the land but plastered to the direction of the garden of the mansion. There is a well, a stone mortar, locally called *soku*, and an oven in the garden located in the southeast direction. To the southeast of the garden where the slope is at its lowest, the annex that borders Emniyet Street has been used by the museum administration since 1980. Figure 3 shows the layout plan of Nizamoğlu Mansion [23], and Figure 4 the garden walls surrounding the mansion, and the garden and mansion entrance doors [30].

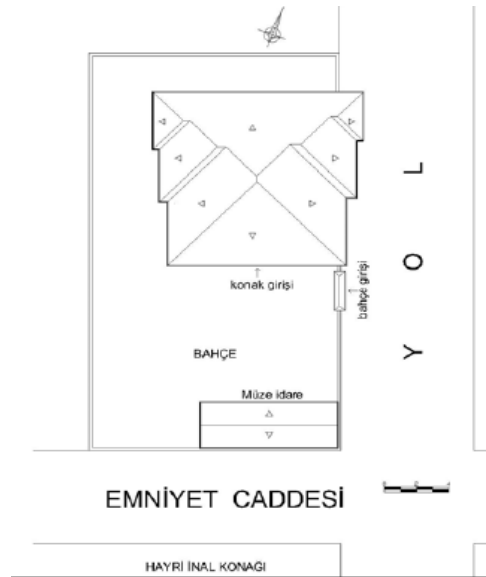


Figure 3. Nizamoğlu Mansion Site Plan [23]



Figure 4. Nizamoğlu Mansion Garden Wall, Garden and Mansion Entrances [30]

Hayri İnal Mansion has a narrow garden in the northeasterly direction and a large one in the southeasterly direction. The mansion is enclosed by a somewhat low and gradual garden wall made of rubble stone in the northeast, southwest and southeast. The entrance to the garden of the mansion is from Cami Street towards the northeast and Müze Street towards the southwest. The entrance in the northeast direction is on the garden wall made of rubble stone. It could be stated that the mansion used to be much bigger in the past which had storage for coal, bath, 2-3 wells, fountain and a garage [19]. The garden wall surrounding the mansion today and the garden gate were rebuilt during the restoration of 2007 and are not original. The sliding and large part of the garden gate is for vehicles, while the leafed and narrow part of it is reserved for the visitors of the cultural center. As the ground level of the mansion is lower than the street level, the garden wall is perceived to be higher than the

garden and lower than the street. The garden wall gradual in all directions is connected with wooden beams at various levels. The upper part of the garden wall is made of pantile with eaves. There is a gate frame made of yellow ashlars in the garden entrance towards southwest. Here there are the double-leaf wooden entrance door and the well. The surface of the wall was transformed into an arch established at a higher level than the height of the gate in the direction of the garden. The gate was built in accordance with the original state of the garden gate. There is an entrance courtyard of the mansion to the southeast of the garden and a garden wall made of stone about 100 cm. The access to the mansion is through the garden in the southeasterly direction. Figure 5 shows the layout plan of Hayri İnal Mansion [31], while Figure 6 shows the garden wall surrounding the mansion, and the garden gate and entrance door of the mansion [30].

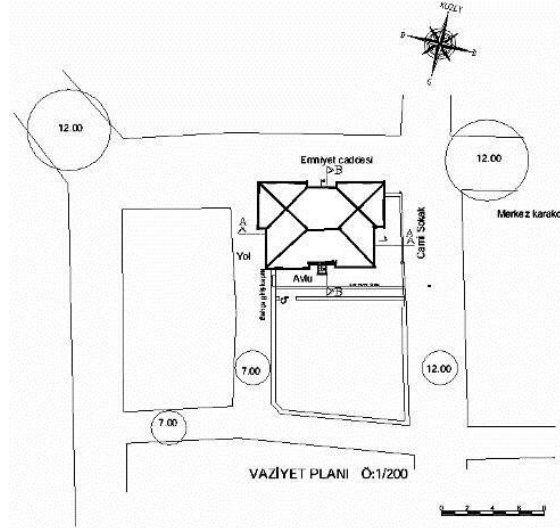


Figure 5. Hayri İnal Mansion Site Plan [31]



Figure 6. Hayri İnal Mansion Garden Wall, Gardens and Mansion Inputs [30]

3.2.2. Load-Bearing System

The load-bearing systems of Nizamoğlu and Hayri İnal mansions are both frame house over stone masonry. The foundation and the basement and ground floor walls are made of stone. The width of the walls, which are part of the load-bearing system in both mansions, varies between 80 and 100 cm. Wood is used in the upper floors of the mansions as the load-bearing material. The gaps between the wooden pieces were filled with adobe brick and stone and plastered [23, 31]. The hall and the corridors are made of stone in the ground and upper floors of Nizamoğlu Mansion, while the other spaces and the ground and upper floors of Hayri İnal Mansion are made of wood.

3.2.3. Plan Characteristics

The characteristics of the plans of Nizamoğlu and Hayri İnal mansions display similarities in terms of the use of ground and upper floors and spatial configuration. As the lands are inclined in the direction of northwest-southeast, the mansions seem to be two-storey in northwest and three-storey in southeast as a result of disclosure of the basement floor. The basement height in the mansions with partial basements is lower than the other floors. The basement floors of the mansions covered with thick stone walls which keep the space

cool are suitable to store food. The spaces in the basement floors, locally called *mağza* which signifies cellar, are used as storerooms [19]. While the connection that exists between these places in the mansion with the kitchen is present in Hayri İnal Mansion, it was closed during the restoration work in Nizamoğlu Mansion. In both mansions, the basement floor is approximately 100 cm below the garden level. The access to the basement floor of the mansions from the garden is through the stone stairs with six risers underneath. Today, the basement floor of Nizamoğlu Mansion is used as a storeroom and boiler room, while the basement floor of Hayri İnal Mansion is used as a storeroom. The walls of the spaces in the basement floor are plastered and painted, stone is used for the flooring and the ceilings are made of wood. In the basement floor of Nizamoğlu Mansion, one stand-alone porthole window and two other porthole windows grouped together in the southwest direction are barred with an iron cage for security reasons. The walls of the basement floor of Hayri İnal Mansion are formed with ashlars that can be found in the environs. The ceiling, which is in its original state, is low in the basement floor of the mansion in the northeast-southeast direction. Figure 7 shows the basement floor plans of Nizamoğlu and Hayri İnal mansions [23, 31].

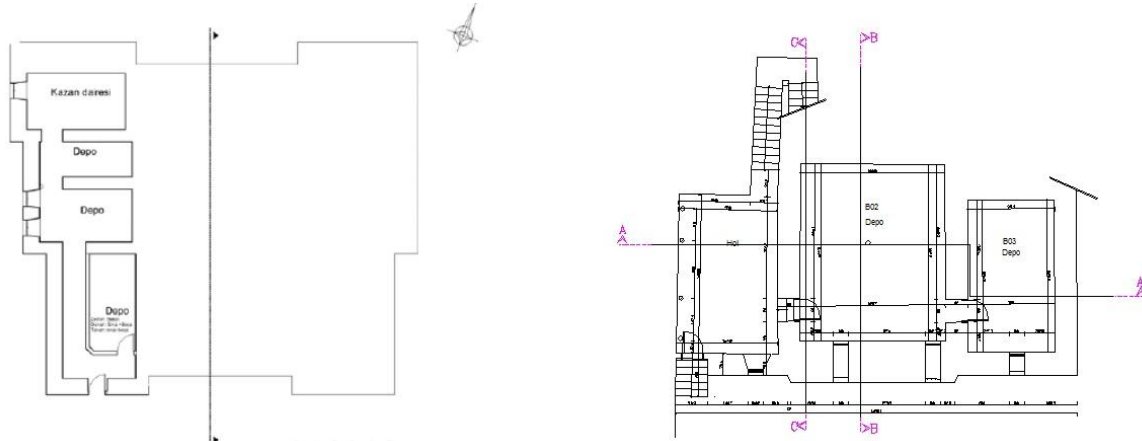


Figure 7. Nizamoğlu and Hayri İnal Mansions Basement Floor Plan [23, 31].

The plan schemes of the ground and upper floors of the mansions which have an inner hall plan type are almost symmetrical. The entrance to Nizamoğlu Mansion is through a baroque, four-riser stairway and a vestibule. The stairs and the vestibule are made of stone. The entrance to Hayri İnal Mansion is through a four-riser stairway and a vestibule with handrails on the left and right side. The stairs, vestibule and the handrails are made of stone. The entrance to the mansions is through the façade line retracted by a niche, and a wooden double-leaf door equipped with an iron cage due to security reasons. The entrance door of Nizamoğlu Mansion is flush, while the door of Hayri İnal Mansion is arched. In the southwest part of Nizamoğlu Mansion, there are stairs, rooms and kitchen, and rooms and toilet are located in the northwest part. The space just in front of the hall, 60 cm below the hall, was originally used as a storeroom with stone flooring and wooden beamed

ceiling. After the transformation of the mansion into a museum, the storeroom was first used as the library then as the seminar room. On both sides of the hall, there is one hidden room directed to the corridor with doors. The wooden flooring of the rooms and the ceiling were renewed during the restoration work. All the wooden doors of the rooms of the mansion are in their original state and painted in two colors with oil paint.

In Hayri İnal Mansion, there are storerooms in the southwest, a double-arm staircase, kitchen and toilet in the northwest, two rooms that open to the hall and look over the garden in the southeast and the main room is located in the northeast part of the mansion. Unlike Nizamoğlu Mansion, the doors of the rooms are directly connected with the hall. In both mansions, the walls are plastered and painted, and floors and ceilings are made

of wood. While the hall, corridors and kitchen in Nizamoğlu Mansion have stone flooring, all the floorings in Hayri İnal Mansion are wooden. The original location of the toilet could not be detected in the mansions that maintain the façade features to a large extent. However, to provide the contemporary comfort standards and to meet the needs of the increasing

number of visitors of the museum and the cultural center, arrangements were made in the interior space of the mansions. The northeast entrance door located at the upper level in Nizamoğlu Mansion is original and is connected to this area transformed as a toilet. Figure 8 shows the ground floor plans of Nizamoğlu and Hayri İnal mansions [23, 31].

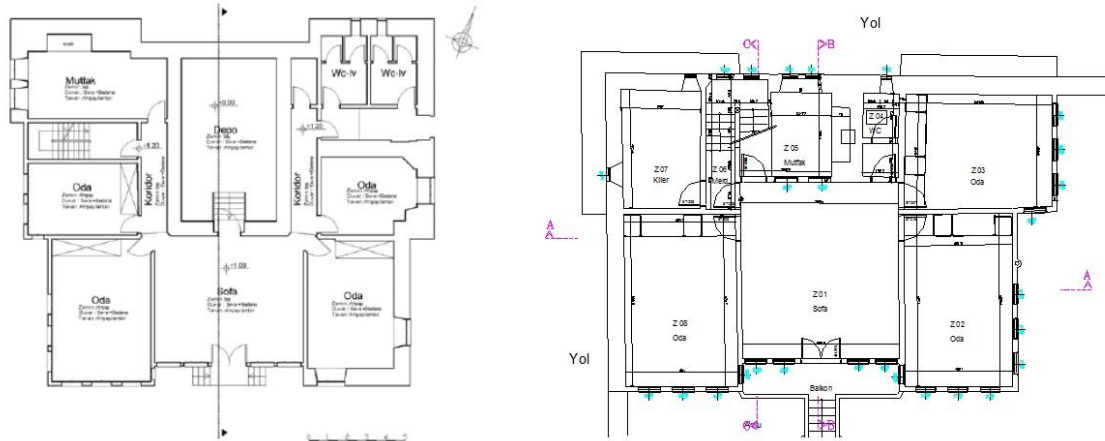


Figure 8. Nizamoğlu and Hayri İnal Mansions Floor Plans [23, 31]

In both mansions, the upper floor is like the repetition of the ground floor plan. On the upper floor of Nizamoğlu Mansion, the main room is in the southwest part, a room connected to the main room and kitchen are in the northeast part, and another main room, a bridal chamber and the bathroom are in the northeast. The access to the mansion is in the northwest direction, from the upper level, through the garden. The entrance door is wooden, double-winged and original [23]. The stone platform which is used as the entrance hall is 125 cm below the hall and is like an extension of the hall.

The access to the hall and rooms on the upper floor is through two narrow and one large stone stairways located on the northwest and southeast of the platform. The sneeze guard between the hall and the platform used in the past is no more present [24]. On the upper floor of Hayri İnal Mansion, the rooms and the main room in the northeast direction are directly connected to the hall. In the northwest of the mansion there are the kitchen and toilet. Figure 9 shows the upper floor plans of Nizamoğlu and Hayri İnal mansions [23, 31].

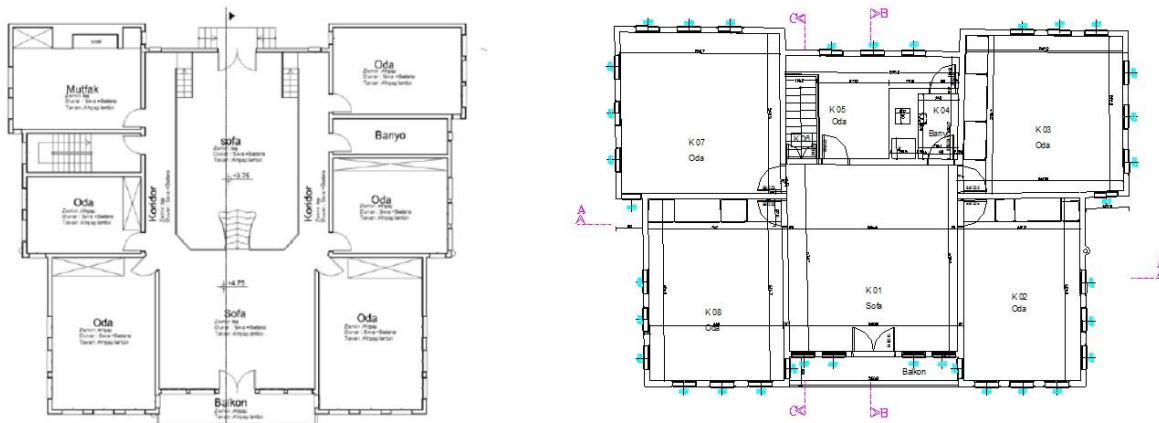


Figure 9. Nizamoğlu and Hayri İnal Mansions Upper Floor Plans [23, 31]

3.2.4. Façade Characteristics

Similar to the Turkish house, the plain and symmetrical façade layout of Nizamoğlu and Hayri İnal mansions is the result of the plan. The balconies and overhangs used in Nizamoğlu and Hayri İnal mansions bring about dynamism to the façades. The overhangs of the mansions are often on the façades facing the street. The

overhangs created by the extension of the elements that carry the flooring of the upper floor are plastered underneath. In the southwest and northeast façade of Nizamoğlu Mansion, the overhang is supported by three S-shaped wooden buttresses on one side and four on the other. Wooden moldings are used at the level of the floors and wooden pillars on the corners of the mansions. On the upper floor of both mansions, there is

a balcony in the trace of the niche defining the entrance to the ground floor. Wooden flooring and handrails of the balcony in Nizamoğlu Mansion are original. The balcony flooring is ceramic tile and iron handrails are in their original state in Hayri İnal Mansion.

In the southeast façade of the mansions, there is a double-leaf door to the balcony in the southeast direction of the hall, and on the both sides of the door, there are two doors, perceived like sneeze guards, from the ceiling to the floor. The number and form of the windows on the ground floor of both mansions are repeated on the upper floor, and the windows typology in the entrance hall is reflected on the upper floor, albeit with small differences. Although the entrance and balcony door proportions of Hayri İnal Mansion are preserved, the forms of the doors are differentiated and the arched door at the entrance is transformed into a flush door on the upper floor. While the balcony of Nizamoğlu Mansion is covered with a roof, the roof of Mansion Hayri İnal is open. The wooden buttresses of Nizamoğlu and Hayri İnal mansions located on both sides of the balcony are different in form. In Nizamoğlu Mansion, on the southwestern façade, the room and kitchen are predominated by double windows and the room by triple windows. The symmetry of the southwestern façade of the mansion is impaired in the southeastern direction. The size and form of the windows that impair symmetry on the northeast façade of the mansion might indicate that the windows are not original. The windows grouped in three are repeated in the on the northeastern façade of the mansion. The

window layout of windows grouped in three in the room next to the stairway going to the upper floor and of the windows in the two rooms connected to the hall, one in the southwest-southeast, the other in the northeast-southeast direction, reinforces the symmetry of the plan in Hayri İnal Mansion. The proportion of the windows is generally $\frac{1}{2}$ in Hayri İnal and Nizamoğlu mansions. In Hayri İnal Mansion, the windows of the hall on the ground and upper floor are guillotine, while the windows of the rooms are in two pieces, top and bottom, and sash windows. The windows in Nizamoğlu and Hayri İnal mansions are generally wooden jamb. The wooden jambs are flat over the windows and circular under the windows in Nizamoğlu Mansion, while they are almost flat and on the top and bottom in Hayri İnal Mansion. In Nizamoğlu Mansion, yellow cut stone jambs are used in the kitchen windows facing southwest. In both mansions, all windows and doors are wooden, and some of the windows are equipped with iron for security purposes. The roof in Nizamoğlu Mansion is flat to follow the façade of the rooms and to cover the balcony, while in Hayri İnal Mansion it is drawn in following the façade in the southeast direction. On other façades, the plan is parallel to the upper floor plan scheme of the mansion. The tiled roofs of the mansions are covered with pantile. Eaves of the roof are covered with wood. Figure 10 [23, 31] and 11 [30] show the façade layout of Nizamoğlu Mansion, while Figure 12 [23, 31] and 13 [30] the façade layout of Hayri İnal Mansion.



Figure 10. The Southeast, Northwest, Southwest and Northeast Façades of Nizamoğlu Mansion [23]



Figure 11. Façade Layout of Nizamoğlu Mansion [30]



Figure 12. The Southeast, Northwest, Southwest and Northeast Façades of Hayri İnal Mansion [31]



Figure 13. Façade Layout of Hayri İnal Mansion [30]

3.2.5. Interior Space

The rooms of Nizamoğlu and Hayri İnal mansions are in accordance with the spatial typology of the Turkish house and fulfill the needs of the users, such as

sleeping, resting and hygiene. Despite the simplicity of the façades of the mansions, the interior spaces are decorated and impressive. While the rooms for everyday use are simple, it is observed that the decoration increases according to the type of user. The

flooring of the rooms on the ground floor of Nizamoğlu Mansion and the flooring and the ceiling of the hall are wooden. On the ground floor, the wainscot and the serrated cut (dendan) ceilings are made in accordance with the original form. On the upper floor of the mansion, on the southwest and northeast walls of the hall, there are symmetrical plastered niches. The wooden buttresses on the wooden pillars located between the railings of the platform facing the hall are hand-carved and the joints they form with the ceiling are decorated. The hall, the platform in front of the hall, the kitchen and the corridors are wainscot, whereas the ceilings of the main rooms are colored, with laths decorated with interlocking arrow head motif and rosettes in the midst and cored. The ceiling of the bridal chamber has floral motifs and rosettes between the laths with two-color double-head arrow motif. Corner-ceiling joints and deletions is geometric in main room and the hall. The corner-ceiling joints, there are paintings

describing next to the moldings, there are paintings depicting some important social, historic events about Yozgat and symbols related to religions. The owners of the mansion state that the wall paintings are made by the first owners of the mansion and that they preserve them within the period they use the mansion [19]. The owners of the mansion state that the wall paintings are made by the first owners of the mansion and that they preserve them within the period they use the mansion [19]. In the kitchen on the northwest side, there are kitchen stove, cupboards and shelves. The paneled wooden doors and cupboards in the mansion are original. Nizamoğlu Mansion is used as the Museum of Ethnography. In the rooms on the ground and upper floor, in addition to the local female-male clothing, manuscripts and everyday kitchen items, there are archaeological artifacts exhibited as well. Figure 14 and Figure 15 shows the interior spaces and the details of painting and decoration of Nizamoğlu Mansion [30].



Figure 14. Interior Space of Nizamoğlu Mansion [30]



Figure 15. Details of painting and ornamentation of Nizamoğlu Mansion [30]

The room in the northeast-southeast direction on the ground floor of Hayri İnal Mansion is connected to the room in the northwest-northeast direction. This room and the room in the same direction on the upper floor are used as owners' bedroom during summer and winter seasons. The original bathing cubicles in the cupboards in the rooms used as main rooms were preserved when the house was transformed into a cultural center. The flooring of the rooms of the mansion is wooden and the ceiling is wainscot and was made later in accordance with its original state. is the guest room. The owners of the mansion state used to be used for organizing feasts for guests' room that in the southwest-southeast direction is connected directly to the hall [19]. There is an arched niche formed with plaster in the in the northwest direction of the sofa on the upper floor of the mansion. The owners of the mansions state that there is a corridor just behind the kitchen and the toilet connected to the hall used for service purposes by the

workers of the mansion [19]. The wooden ceiling and the cupboards of the main room in the northeast-southeast direction on the upper floor of the mansion and the decorated wooden ceiling and cupboards of the room connected to the main room in the northwest-northeast direction were made later in accordance with the original state. The room on the ripper floor in the southwest direction which used to be the main room is now organized as a workroom. The ceiling of this room is cored, colored, with wood laths and is original. The flooring of all the spaces on the ground and upper floor of the mansion is wooden, except for the balcony and the toilet. Hayri İnal Mansion is today a cultural center aiming at promoting the culture of Yozgat. Figure 16 and Figure 17 shows the interior spaces and details of ornamentations of Hayri İnal Mansion [30] and Table 1 comparison of the Nizamoğlu and Hayri İnal Mansions.


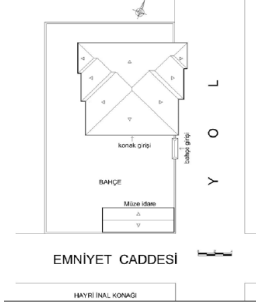
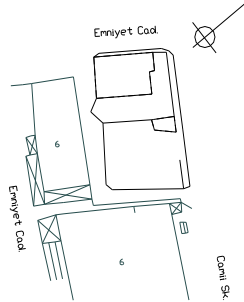




Figure 16. Interior Space of Hayri İnal Mansion [30]



Figure 17. Details of decorations of Hayri İnal Mansion [30]

Table 1. Comparison of the Nizamoğlu and Hayri İnal Mansions

	Nizamoğlu Mansion	Hayri İnal Mansion
Date of construction, period	1871, Typical Ottoman house, late period	1880, Typical Ottoman house, late period
Number of floors	Basement, Ground, 1. Floor	Basement, Ground, 1. Floor
Date of registration	1975	1979
Date of restoration	1985	2007 (Yozgat Municipality)
Functions from past to present	Mansion, Girls Art School, Monopoly store, 1985-.... Museum of Ethnography	Mansion 2007-....Cultural Centre
Owner	Vasaki and Joannaki, Government-owned, Fatma Hanım, Nizamzade Ali Efendi	Hayri İnal
Urban location		
Layout plan		
Load-Bearing System	Wooden Carcass on stone foundation	Wooden Carcass on stone foundation
Plan Characteristics	inner hall plan type	inner hall plan type
Façade		

4. CONCLUSIONS

The transfer of traditional houses which are part of cultural heritage to future generations is important in terms of ensuring social and cultural sustainability. It is observed that the rich architectural heritage of Yozgat of the past survived with only few houses to date due to

irregular development, lack of awareness of conservation, concerns for increasing urban rent, apathy and economic conditions. The few mansions that survived until today are used with appropriate functions and preserved with their original spatial characteristics. The lack of preservation of these mansions, once home to extended families in Yozgat, makes it difficult to

convey customs and traditions, user's identity, culture and way of life to future generations.

Nizamoğlu Mansion as one of the Mansions that examined in this study is used as more passive compared with Hayri İnal Mansion related to nature of its function. Hayri İnal Mansion as functioned as Cultural House which hosting private meeting in Yozgat is used as more active.

It is known that traditional housing varies according to the gender of the spatial structure of places (haremlik-selamlık) and, in relations with Islam, privacy diversified (courtyard/garden wall, small and latticed windows) is shaped by structural elements. In this study it is examined that, despite Nizamoğlu Mansion built as a minority (non-Muslim) house and, Hayri İnal Mansion built as a Muslim house there are no major spatial differences have been observed between them. Both mansions have been used by large families several generations living together. The walls of the garden and courtyard which carried out of family life and for the variety of food and several preparations to provide privacy are high. This situation produced by a gender non-Muslim subject of privacy concerns, the values of the society in which may indicate that a respectful attitude. It is understood that based on Nizamoğlu and Hayri İnal Mansions that host a certain period of living together Muslim and non-Muslim communities which have hospitable and strong neighbourly relations in Yozgat. Both rooms of the mansion, same as in traditional Turkish (typically Ottoman house) house, in order to meet the needs of the extended family are multifunctional. In terms of typology mansions plans have similar characteristics to each other and to traditional Turkish house, although the differences are also included. The most significant difference between mansions is seen in decorations with shared space configuration of the hall. As a non-Muslim house built Nizamoğlu Mansion which stone floors, from which sunken, venue binds to and embellished wooden columns. That columns paintings and ornaments supported by the hall is transformed into were shaped by the wood upholstered, lean and surrounding rooms modest hall in Hayri İnal Mansion. As a non-Muslim house; in Nizamoğlu Mansion's rooms, interface of hall walls and ceiling ornamentations are not seen in Hayri İnal Mansion which is a Muslim house. Similarly Nizamoğlu Mansion located on the cabinet's and the rooms' doors in floral designs, wood and chiselled embellishments, is transformed in the geometric layout and wooden ornamentations in Hayri İnal Mansion. Similarity of the same approach, both of the mansions' load bearing systems, plan, façade, exterior and interior of the properties which can be explained by the designer's and made by craftsmen's have with technical knowledge and way of life. Despite of the mansions have retained the characteristics of spatial structure as a single building, but they are incompatible because of their surrounding buildings are clearance, scale and density. In this context, the need to protect of the traditional houses with the integrity of the tissue is emerging.

In terms of social and cultural sustainability, maintaining the original function of the houses and

urban fabric depends on the extent these houses meet contemporary criteria. In the cases in which it is not possible to maintain the original function of traditional houses or in which the original characteristics of the buildings are altered, adaptive reuse contributes to the conservation of these values. In order to protect cultural heritage, transfer it to future generations and to preserve traditional houses and the unique fabric they constitute for ensuring social and cultural sustainability, documentation (survey) through up-to-date and scientific methods should be made, restitution and restoration work should be developed, and other efforts should be put towards revealing such values together with their environs and maintaining them through assigning cultural, social and tourism functions to them. With social consciousness and responsibility, adaptive reuse of cultural values that should be protected contributes to both social and cultural sustainability and conservation of resources. Adaptive reuse should be carried out without compromising the architectural identity of the buildings to be preserved. For this purpose, policies towards raising social awareness and preservation should be made, studies on documentation, data gathering, evaluation, decision making and restoration should be carried out and preservation funds should be established.

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