Spatial Analysis of Traditional Ayvalık Houses

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Abstract
Architecture is a combination of economic, political, and cultural developments and as a result of this fact, it is reflective of the social life based on the specific characteristics of the period. The reflection of historical and cultural values in traditional architecture is significant in terms of obtaining historical facts. Traditional structures carry examples of architectural heritage to the future; especially socio-cultural changes have an impact on architecture. In this study, the traditional residential architecture of Ayvalık district in the province of Balıkesir-Turkey, which carries the traces of the 19th century history in a socio-cultural and economic sense, is shown. Ayvalık is a district that provides examples of architecture, and that carries to the present day the 19th century social life with its traditional structures, where there are different economic, cultural and ethnic structures, and which boasts natural features as a result of the diversity formed by these different structures. It is observed that the district has increased its locational value even more recently thanks to its historical texture, commercial areas, and touristic facilities. In this regard, the aim of this study is to reveal in a spatial manner the traditional residential architecture shaped by the geographical, social, cultural, and architectural features of Ayvalık. In the study, approximately 20 houses built in different periods of the Ottoman Empire have been examined within Ayvalık's urban fabric, and spatial analyzes of 4 traditional houses have been made in the context of "space, facade, construction" features. Finally, the current status of the houses has been revealed with the transformation of the historical and cultural heritage resulting from traditional structures.

Keywords: Cultural Texture, Traditional Houses, Ayvalık, Ayvalık Houses, Spatial Transformation.

1. Introduction

The traditional houses of Ayvalık district (Balıkesir) in the Aegean region are significant as they carry 19th century residential architecture traces of both the district and the socio-cultural environment. Ayvalık has become an unrivaled district in the Aegean region with the appearance of bourgeois culture and the development of establishments such as olive oil and soap factories in parallel with the rise of İzmir as a commercial city in the 17th and 18th centuries (Uçar, 2013a). Due to its geopolitical location, the large number of the Greek population, and agricultural products such as olives and olive oil, it became an important commercial center. Over time, Ayvalık became one of the port settlements that stood out with international trade and industrial activities linked to the economic and political environment of the Ottoman Empire (Akın, 2015a). The coexistence of Turkish and Greek people enabled the city to take shape under different cultural, social and economic conditions, however, different cultural effects gradually faded away after population exchange (Uçar, 2013b). In the period when Muslim and Greek residents lived together, Ayvalık, consisting of 11 neighborhoods located around the churches in the city and named after churches, was shaped under the intense influence of socio-cultural and economic conditions of residents of different ethnic backgrounds (Uçar, 2014). Different ethnic structures made themselves felt in the urban sense and houses with Turkish-Greek architecture emerged. The houses that bear the traces of the Ottoman period and make up the silhouette of Ayvalık, are reflected especially on the exterior facades of the

houses. Exterior facades became an important factor that determined both the architecture and lifestyle of the period. Many of the houses have been worn out due to a lack of maintenance, unconscious use and wrong restoration. Many buildings either disappeared due to unconscious use or lost their value and thus their original historical texture.

In this respect, this study tries to shed light on the traditional Ayvalık houses, which have a multicultural and ethnic social structure, in the context of "space, facade, construction" features significantly emphasizing their historical value. Within the scope of the study, the related literature has been scanned; on-site observation, interviews and investigations have been made. The architectural status of 20 traditional Ayvalık houses was documented with photographs and it has been aimed to determine the current status of the buildings. In this sense, detailed analysis of 4 of the 20 traditional houses was carried out based on three criteria. These 4 houses have been selected due to such reasons as they were constructed in a different period, they were/weren't subject to restorations and their current status is different from that of other structures. As a result, it has been observed that traditional Ayvalık houses have left their place of unconscious use due to increased commercial and tourism concerns. The bottom-line conclusion of our study is that it has become a necessity that the Council of Monuments informs the people based in the region of the use and maintenance of traditional buildings and where required, carries out inspections and helps raise awareness on the maintenance, renewal and protection of traditional buildings.

2. Ayvalık and its Historical Development

Although it is not known exactly where the name of "Ayvalık" came from, the President of the People of Ayvalık Association, Mr. Kukunora, expresses in his book named "Ayvalık: The Capital of Eolya" that first settlers in Ayvalık may have come from Kidonia village of Lesbos or Kidonies regions of Crete and the name may have originated from Ayva (meaning "Quince" in Turkish) or Ayvada (a local name given to a type of mussel) (Yorulmaz, 2008). Although Greek sources say that Ayvalık was founded by the Greeks in the late 16th century and early 17th century, the presence of the Turkish neighborhood on a hill overlooking the harbor (Aka, 1944) is also mentioned by these sources (Aka, 1944).

Figure 1. Turkey-Balıkesir

Figure 2. Balıkesir

Figure 3. Ayvalık

Today, Ayvalık district (Figure 1-2-3) is one of the popular tourist districts of the western part of Turkey. Ayvalık, which has a coast to the Aegean Sea, has 23 islands, the largest of which is Alibey Island (Tibet, 2013). Besides tourism, olives, olive oil and fishery are the most important income sources of Ayvalık.

With the development of the economy in the 18th century, the city started to develop as some of the Greeks who migrated to Anatolia settled in the port regions of Ayvalık (Tekeli, 1992). Ayvalık, which was an agricultural settlement until the 18th century, turned into an industrial city as a result of the industrial revolution, and thanks to the political and economic privileges of the Greeks living in the district, the olive oil industry was established and the city started to grow economically and demographically (Olgun et al., 2018a). With the development of trade, the city population increased and thus, Ayvalık and its surrounding region developed, which accelerated the construction of civil architectural structures. Ayvalık, which saw much destruction due to wars and

earthquakes since its early periods, underwent many restorations; damaged buildings have been repaired or replaced by newly-built structures. As the residential areas in the Ottoman Empire required regulation of construction activities, many cities and districts in Anatolia and eastern part of the country had staff specializing in architecture. In addition to architectural works, Ayvalık was one of the settlements with its own architectural staff (Ergül, 1999). Ayvalık, which was occasionally damaged by wars and earthquakes, turned into a residential area over time, and its borders continued to expand until the Republican era. According to the Turkish-Greek Population Exchange Protocol in 1923, Greeks living in Ayvalık migrated to the coastal islands and replaced by Turks living in Crete-Thessaloniki-Mytilene (URL1). Ayvalık, where Greeks and different ethnic groups lived for a long time, underwent a culture synthesis with the settlement of Turks in the region.

In 1950s, migration from rural areas to urban areas and urban structure changes manifested themselves in Ayvalık and many of the old buildings have been demolished and replaced with new ones. Tourism pressure that started after 1960 damaged the historical identity of Ayvalık and the number of concrete structures increased. A reflection of the increasing rapid urbanization in the big cities after 1980 was also felt in the developing districts and brought a new reconstruction need with the increase in the population. In this sense, there are three periods in the change of traditional Ayvalık houses: First Change Period (1922-1950), Second Change Period (1950-1980), and Third Change Period (1980 -...). During these periods of change, Greek and foreign minorities are highly influential on the character of Ayvalık housing. In the population exchange period, Turks didn't felt they belong to the district and they didn't change the spatiality of the buildings till they obtained their titles of deed; however, after receiving their deed, they made spatial changes due to their cultural needs (Gönül, 2004). For this reason, old Greek houses constitute the general basis of the city plan in Ayvalık. Many of them are still in use and some are under protection, but many buildings have been damaged by improper intervention and unconscious use.

Ayvalık lost some of the examples of civil architecture in the 1944 earthquake; afterwards, the city entered into a construction process the effects of which are still visible today, and it experienced substantial changes based on tourism and the associated construction sector (Olgun and et al., 2018b). With the increase in industrial activities in Ayvalık, many large and small workshops opened and the production complexes were modernized starting from the 19th century to the 1980s, keeping up with technology (Kabukçu, 2018). However, the tourism activities that started in the 1980s thanks to its geographical location have made the region a popular tourism destination and the urban construction activities have increased. In order to prevent wrong construction activities and preserve Ayvalık's history, socio-cultural fabric and urban texture, the High Council of Real Estate Antiquities and Monuments declared Ayvalık as a historical and natural site in 1976 (URL2). In this way, although traditional Ayvalık houses were partially put under protection, this also led to illegal construction, unauthorized intervention to traditional buildings, and urban and spatial deterioration.

3. Architectural Features of Traditional Ayvalık Houses

Traditional housing architecture is the architecture whose origin is shaped by the shelter culture of Central Asian nomadic communities and cultural accumulation in Anatolia. In other words, traditional housing defines the houses that are diversified according to ethnic differences and which are identified with the society, historical and cultural value of urban fabric (Türker, 2007). With the reflection of life styles and socio-cultural and economic relations on the housing, traditional buildings have peculiar and original identities, understanding of the period they were made and documentation values (Ayyıldız, Özbayraktar, 2018). For this reason, the heritage of cultural assets serves as one of the concrete and narrative documents of the past life.

The environment, topography and climate are influential in the construction of traditional residential architecture, thus local people develop their own unique construction techniques. As in many parts of the world, traditional structures with different techniques and materials have been built in Anatolia (Atalan, 2018). In this regard, traditional architectures that stand out in Anatolia and gain an identity specific to each region reflect the past of their region. One of these is the Ayvalık houses that bear Turkish and Greek ethnic traces. In the 18th and 19th centuries, more than two million Greeks lived mainly in the West Anatolian coasts outside of Istanbul and played an active role in the architecture of their cities. Thus, it was the Greek people who constituted the majority of the Ayvalık population in the 19th century (URL3). The traditional Ayvalık houses are 19th century Greek houses that were vacated by their residents during the population exchange process. One of the most important reasons for these houses and the texture of the historical city to reach to the present day is that they were taken under protection by the Council of Monuments (Akın, 2015b). Building masters based on the Greek islands, which were a part of the Ottoman Empire in the 19th century, also went to work in cities such as Izmir, Istanbul and Edirne and contributed to the diversification and hybridization of the 19th century residential tradition by carrying the traditional building systems of the region they live in to Anatolia (Çıkış, 2019). Throughout the 19th century, foreign architects worked in the zoning and construction areas in Ayvalık where especially the Neoclassical style was effective as the Ottoman Empire attached importance to the construction activities and these architects created products of a western character (Eyice, 1993). These structures were shaped under the economic, political and cultural environment of the Ottoman period and carried the traces of a different ethnic culture. Just as the industry and commerce had an impact on the population growth, it also influenced the urban and spatial setting. In the formation of the Ayvalık's urban planning, its location and especially the effect of the sea is also important. Ayvalık's urban planning carries the traits of a grill-shaped layout; the streets and roads cross each other vertically and there are square or rectangular islands between the streets (Kocadağlı, 2011). The houses are positioned to take the wind into the house and protect from the breeze blowing from the sea in order to get rid of the hot climate effect and housing plots are planned as square or rectangular (URL4). The houses are built in an adjacent order and to ventilate the interior, the windows on the exterior facade are built with wide openings, there are no balcony or front courtyard; there are generally side or rear courtyards. These building types generally formed the general features of the residential architecture of the Aegean coast and islands (Levi, 2000). Traditional Ayvalık houses are adjacent one or two-story buildings, usually built on narrow streets, with the facades of the buildings facing the street. The ground floors are made of stone and the upper floors are made of timber-work or bricks and the upper floor stairs are partially or wholly of stone or cast iron brackets. Facades are generally symmetrical if it is a one-story house and asymmetrical if it is a several-story house. The general construction material of Ayvalık Houses is a hard and durable type of stone, which is an abundantly-found natural material of the region (Akın, 2015c).

Figure 4-12. Ayvalık Houses

Ayvalık (Figures 4-12), which has houses deemed to be within the traditional residential architecture, is like an open air museum rich in historical urban textures. In this respect, approximately one thousand traditional houses dating back to the 19th and 20th centuries are protected and usable (Işık, Teker, 2019). The city texture formed by Neoclassical civil architecture examples increases the cultural heritage and tourism demand of the region across the district center of Ayvalık and nearby Cunda Island; there are around 1800 registered historical buildings in these regions called "old city" (Gökdeniz, 2015). Neoclassical understanding is the general character of European architecture where there is no eclectic understanding consisting of reflection of styles such as Neo-Greek and Neo-Gothic in architecture (Erpi, 1987). Neoclassical understanding forms the eclectic understanding consisting of the reflection of styles such as Neo-Greek and Neo-Gothic and it is the general character of European architecture, where no particular style exists (Erpi, 1987). Traditional Ayvalık houses are shaped by the influence of Neoclassical style with their ethnic cultural structures, doors, door knockers, facade layouts. In this sense, Traditional Ayvalık houses are clearly distinguished from other traditional buildings with their "space, facade and construction" features as a result of their historical and cultural textures. Accordingly, the "space, facade and construction" features that determine the characteristic structure of the Ayvalık houses that emerged as a result of the literature studies are as follows:

Space Features

The structures are generally on a square or rectangular parcel and they are generally built in an adjacent order, facing a street or high-walled side courtyard, side courtyard or backyard. Residential entrance door opens directly to the hall. The main types of halls are "*interior halls (rectangular-shaped halls, L-shaped halls), outer halls, corner halls and central halls*" (Erdem et al., 2007). The main living areas are determined according to the hall's plan; the halls are used as a transition area that provides the passage between the rooms. If the hall is in front of the room, it is called outer hall. If it is between the rooms, it is called interior hall and if the location of the rooms is symmetrical, it is called the middle hall (URL 5). The traditional Ayvalık house usually has a toilet and a well in the back or side courtyard/garden. The buildings which generally have with two or three floors are in Neoclassical style. Houses have one or two doors opening to the street. One of the entrances of the houses with two entrances opens to a workplace (shop/store/warehouse entrance) and the other is a residential entrance. In the shops, there are usually olives, olive oil storage, laundry, cistern or well. On the ground floors, there are generally warehouse, kitchen, and hall areas and on the upper floors there are sleeping and living areas. In addition, there are kitchens and sleeping areas on the mezzanine floors of the buildings. Generally, the upper floors of the residence are designated as living spaces, and some buildings have balconies on the upper floors (Erdem et al., 2007).

Facade Features

The houses generally have two facades, one facing the street and one facing the garden. The front facades of the building are generally asymmetrical. The residential entrance doors enclosed in a niche with stairs treads are among the important symbols of Ayvalık

houses of monumental value. The main entrance doors are quite high and they are made of wood. Most of the door knockers are made in the form of Ancient goddesses, and the year of construction is inscribed on some doors. Next to some residential entrances, there is a second entrance door to a place which is used today as a shop or a warehouse. These doors are smaller than the main entrance door of the house and they are wooden. In addition to the door, other elements that add meaning to the facade are balconies, windows and window sills (Erdem et al., 2007).

Construction Features

Ayvalık houses are made of 50-60 cm thick walls on rubble stone foundation. Rubble stones are used on the exterior walls while cut stones are used on the walls corners. Wooden beams and wood covers are used on floors and ceilings while partition walls are usually brick. The windows are flat, brick arched or wide rectangular, while balconies are made of metal or stone console. Stone is generally used on the facades of the buildings (Erdem et al., 2007). Most of the original structures also have lime plaster on the stone.

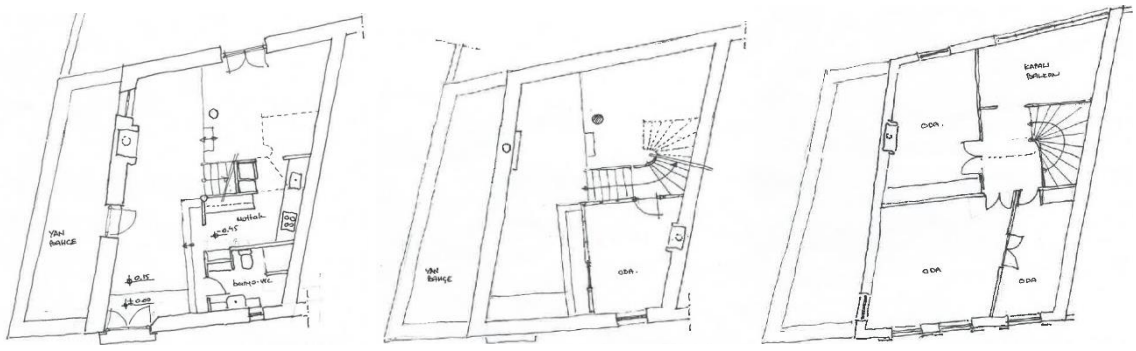
Ayvalık is a city that reflects Turkish and Greek social life, architectural features and traditional texture of the 18th and 19th centuries. Ayvalık houses constitute the most important features of the urban fabric with the quality of stones and wood workmanship, ceiling and wall decorations, wrought iron work, interior design, stair railing, door and figured knockers, cobblestone narrow streets, triangular fronts, adjacent order, colorful stone houses (Asımgil and Erdoğdu, 2013). The "space, facade and construction" features that define the traditional Ayvalık houses and distinguish them from other structures stand out prominently.

4. Spatial Analysis of Traditional Ayvalık Houses

Within the scope of the study, 4 traditional Ayvalık houses built in different periods have been examined and their spatial analyzes have been carried out in line with the above-described "space, facade and construction" features. Since some of the buildings do not have original plans and in order to ensure terminological unity, the building dimensions were taken on site and the housing plans were drawn by free hand.

4.1. House 1 (Door number: 2) Spatial Analysis

The first house (hereinafter referred to as "House 1") evaluated within the scope of the study was built in 1871 as a masonry structure in Ismet Pasa neighborhood. The building has 2.5 floors including ground, mezzanine and first floor. On the side of the building, there is a 150 cm wide side courtyard surrounded by a high wall (Figures 13-14-15). The spatial analysis of the structure is as follows:



Ground Floor's Plan | Residential Entrance Mezzanine Plan | First Floor's Plan

Figures 13-14-15 House 1 - Floor Plans

4.1.1. Spatial Features

House 1 is on a square-shaped parcel, one of its facades facing the street while another facade adjacent to the neighboring building and surrounded by high-walled side courtyard and backyard. The entrance door of the house opens directly to the hall; it has an L-shaped hall. When the building was first built, there was a toilet in the side courtyard, but in the new planning, the toilet was located on the ground floor. The building, which has 2.5 floors in neoclassical style, has a double-winged door opening to the street. On the ground floor, there is a kitchen, living room and bathroom/WC. On the mezzanine, there is a sleeping area and on the first floor, there are sleeping areas and a balcony. The bathroom/WC and kitchen are on the ground floor and sleeping area on the mezzanine and living area have been added to the building after renovation works.

4.1.2. Facade Features

House 1 has three facades, one facing the street, one facing the garden/sea and one facing the garden. The door of the house which can be reached with a stairs tread is one of the important symbols of traditional architecture of Ayvalık houses. The doors, joinery and knockers of the building retain their original features. On the cast iron of the high wooden door is written "1871", which specifies the year when the house was constructed. The windows are wide, rectangular, with wooden shutters and wide jambs. The original wooden shutters of the windows on some facades have been replaced with metal. There are lime-plastered original decorations on the front of the building.

4.1.3. Construction Features

House 1 is made of 50-60 cm thick walls on rubble stone foundation. Rubble stones are used on the exterior walls while cut stones are used on the walls corners. Wooden beams and wood covers are used on floors and ceilings and partition walls are made of wood with plasterboard. The windows are flat, brick arched or wide rectangular, while balconies are made of metal or stone console. Stone is generally used on the facades of the building (Erdem et al., 2007). Most of the original structures also have lime plaster on the stone. The interior of the first floor is lime plastered on brick, but the lime plaster that deteriorated during renovation has been replaced with cement based plaster. The lime plaster, which deteriorated over time, was renewed with cement plaster, and the original plaster of interior of the upper floor has been preserved. The windows are rectangular-shaped with brick arch.

Considering the "space, facade and construction" features of House 1, it is seen that it partially preserves its original texture (Table 1). Within the scope of renovation, partial renovations were made without damaging the original texture of the building.

Table 1. House 1 (Door number: 2) Details

Details of the Building		**Interior and Exterior Images of House 1**
Building Name-No	House No. 2	
Construction Year	1871	
Location	Ayvalık	
Neighborhood	Ismet Paşa	
Plot No	523	
Parcel No	19	
Floor area	76 m2	

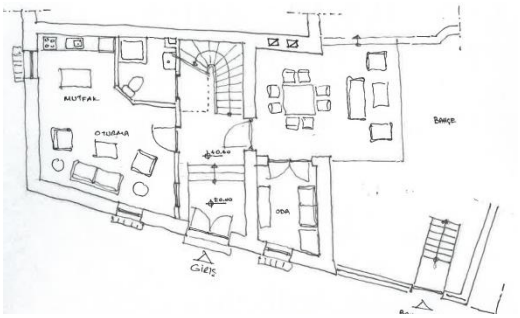
Number of floors	Ground Floor, Mezzanine, First Floor Side Courtyard Backyard
Original Function	Residence
Current Function	Residence
Building materials	(Stone, Brick, Wood) Ground Floor: Stone Mezzanine: Stone First Floor: Brick Flooring and ceilings: Wood
Construction Technique	Masonry structure
Plan Type	Central Hall

Figures 16-29. House 1

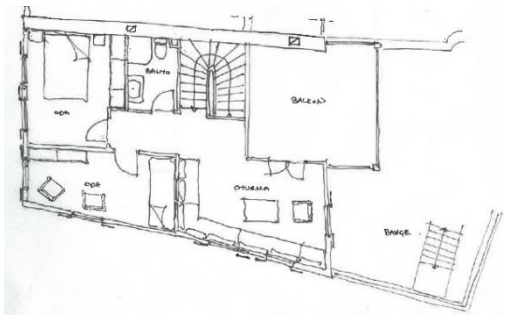
4.2. House 2 (Door number: 5) Spatial Analysis

The second house (hereinafter referred to as "House 2") evaluated within the scope of the study was built in early 1900s as a masonry structure in Ismet Paşa neighborhood.

The building has 2 floors including ground and first floor. On the side of the building, there is a courtyard as large as two houses surrounded by a high wall (Figures 30-31). The spatial analysis of the structure is as follows:



Residential Entrance
Ground Floor's Plan



Side Courtyard Entrance
First Floor's Plan

Figures 30-31. House 2-Floors' Plans

4.2.1. Spatial Features

House 2 is on a rectangle-shaped parcel, one of its facades facing the street while another facade adjacent to the neighboring building and surrounded by high-walled side courtyard. The entrance door of the house opens directly to the hall; it has an L-shaped hall. The building, which has two floors in the neoclassical style, has a door opening to the street. On the ground floor there is a kitchen, living room and bathroom/WC. On the first floor, there are sleeping, living areas, bathroom/WC and also a balcony. The bathroom/WC were originally in the side courtyard; however, a new bathroom/WC were built inside the house after renovations. House 2 also has an entrance door connecting the street and the garden. The courtyard door opens to the stairs and the backyard is reached through the stairs.

4.2.2. Facade Features

House 2 has three facades, two facing the street and one facing the garden/sea. The door of the house which can be reached with a stairs tread is one of the important symbols of traditional architecture of Ayvalık houses. The doors, joinery and knockers of the building retain their original features. The windows are wide and rectangular with wooden shutters. The building's balcony overlooking the side courtyard was renewed and expanded without any resemblance to the original balcony. Although there are no original lime plastered decorations on the facade of the building, it has been observed that renovations were made on both the front facade and side facade without adhering to the original structure.

4.2.3. Construction Features

The House 2 is made of 50-60 cm thick walls on rubble stone foundation. Rubble stones are used on the exterior walls while cut stones are used on the walls corners. Wooden beams and wood covers are used on floors and ceilings partition walls are made of wood with plasterboard. The windows are rectangular and supported by a wooden beam. The exterior and interior facades were replenished with cement plaster instead of lime plaster which deteriorated over time. The outer facade of the building has not been able to preserve its original texture.

Considering the "space, facade and construction" features of House 2, it is seen that there are some deformations in the original texture of the building (Table 2). Within the scope of renovation, partial renovations were made without damaging the original texture of the building.

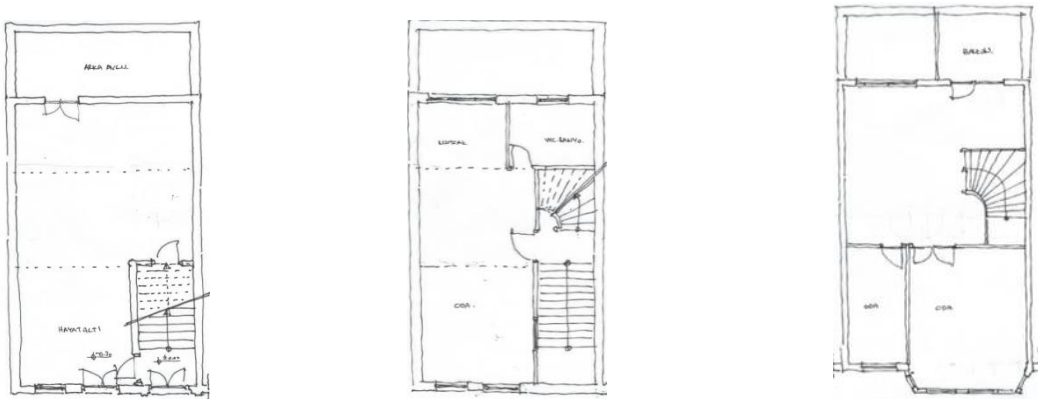
Table 2. House 2 (Door number: 5) Details

Details of the Building		Interior and Exterior Images of House 2
Building Name-No	House No. 5	       
Construction Year	Early 1900s	
Location	Ayvalık	
Neighborhood	Ismet Paşa	
Plot No	523	
Parcel No	24	
Floor area	153,5 m2	
Number of floors	Ground Floor First Floor (side open courtyard)	
Original Function	Residence	
Current Function	Residence	
Building materials	(Stone, Wood) Ground Floor: Stone First Floor: Plasterboard / Lime plaster on wood, cement plaster after renovation Flooring and ceilings: wood	
Construction Technique	Masonry structure	
Plan Type	L-shaped/central Hall	

Figures 32-46. House 2

4.3. House 3 (Door number: 6) Spatial Analysis

The third house (hereinafter referred to as "House 3") evaluated within the scope of the study was built in 1905 as a masonry structure in Hayrettin Paşa neighborhood. The building has 3 floors including ground, first and second floor. At the back of the building, there is a backyard surrounded by a high wall (Figures 47-48-49). The spatial analysis of the structure is as follows:



Warehouse Entrance Residential Entrance

Ground Floor's Plan First Floor's Plan Second Floor's Plan

Figures 47-48-49. House 3-Floors' Plans

4.3.1. Spatial Features

House 3 is on a rectangular parcel with its two façades adjacent to the neighboring building and surrounded by high-walled backyard. The building, which has 3 floors, is built in a Neoclassical style. The entrance door of the house opens directly to the staircase, on the left side of the door entrance there is a store/shop door that is entered from inside the house. As well as the house's entrance door, there is a store/shop door

entrance. The area called store/shop was used as a warehouse. On the first floor of the house, there is a kitchen, living area and bathroom/WC. The central hall is on the second floor and there is a passage to two sleeping areas through the hall. The second floor also has a balcony at the back. There is a central hall type plan in the 1st and 2nd floors.

4.3.2. Facade Features

House 3 has two facades, one facing the street and the other facing rear-adjacent structure. Its front facade is asymmetrical. The door of the house which can be reached with three stairs treads is one of the important symbols of traditional architecture of Ayvalık houses. The door is double-winged, wood and quite high. There was originally wrought iron on the door with the date of the construction on it; however, it has been stolen by the thieves. The doors, joinery and knockers of the building retain their original features. The windows are large, rectangular and woodwork; the original wooden shutters of the building are not present.

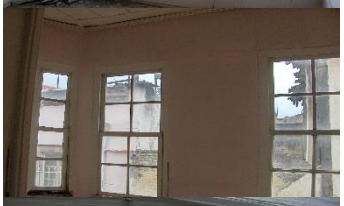
4.3.3. Construction Features

The House 3 is made of 50-60 cm thick walls on rubble stone foundation. Rubble stones are used on the exterior walls while cut stones are used on the walls corners. Wooden beams and wood covers are used on floors and ceilings and the partition walls are made of wood with plasterboard. The windows are rectangular and supported by a wood lintel. The exterior facades were replaced with cement plaster instead of lime plaster which deteriorated over time. The exterior and interior facade of the building partially preserves their original texture.

Considering the space, facade and construction" features of House 3, it is observed that the original texture of the building is preserved but there is a certain level of degradation as no restoration was made (Table 3). It is seen that the original texture of the exterior of the building is preserved; however, its original texture of the interior has seen partial degradation as the required renovation was not made.

Table 3. House 3 (Door number: 6) Details

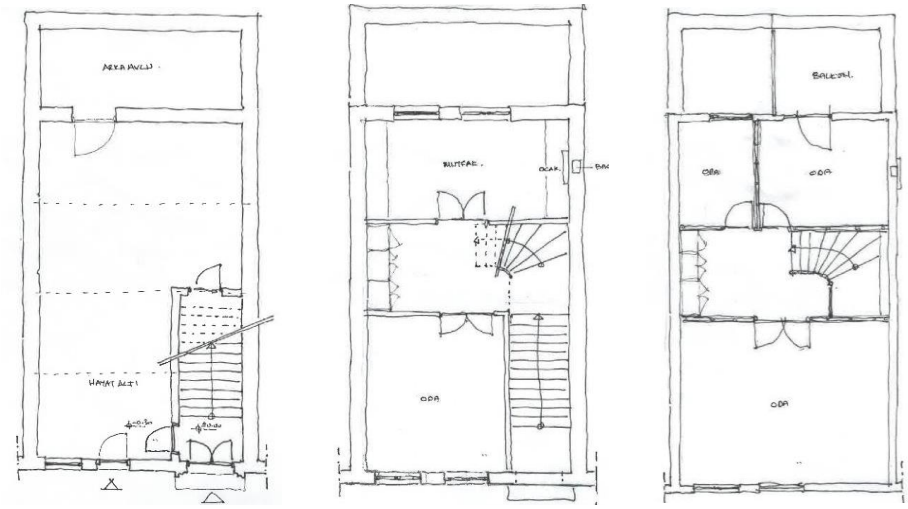
Details of the Building		**Interior and Exterior Images of House 3**
Building Name-No	House No. 6	
Construction Year	1905	
Location	Ayvalık	
Neighborhood	Hayrettin Paşa	
Plot No	298	
Parcel No	24	
Floor area	44 m2	
Number of floors	Ground floor First Floor Second Floor (backyard)	
Original Function	Residence	
Current Function	Residence	
Building materials	(Stone, Wood) Ground Floor, 1st Floor: Stone 2nd Floor: Plasterboard / Lime plaster on wood	

	Flooring and ceilings: wood	       
Construction Technique	Masonry structure	
Plan Type	Central Hall	

Figures 50-63. House 3

4.4. House 4 (Door number: 34) Spatial Analysis

The fourth house (hereinafter referred to as "House 4") evaluated within the scope of the study was built in 1891 as a masonry structure in Hayrettin Paşa neighborhood. The building has 3 floors including ground, first and second floor. On the back of the building, there is a backyard, surrounded by a high wall. (Images 64-65-66). The spatial analysis of the structure is as follows:



Warehouse Entrance Residential Entrance
Ground Floor's Plan First Floor's Plan Second Floor's Plan

Images 64-65-66. House 4-Floors' Plans

4.4.1. Spatial Features

House 4 is on a rectangular parcel with its two façades adjacent to the neighboring building and surrounded by high-walled backyard. The building, which has 3 floors, is built in a neoclassical style. The entrance door of the house opens directly to the staircase, on the left side of the door entrance there is a store/shop warehouse door. As well as the house's entrance door, there is a store/shop door entrance. The area called store/shop was used as a warehouse. Adhering to its original texture, the WC is in the backyard. One can pass directly to the central hall from the first floor and also from the hall to the kitchen and living room. There is another hall on the second floor and there is a passage from this hall to three sleeping areas. There is also a balcony in the sleeping area at the back. There is a central hall type plan in the 1st and 2nd floors.

4.4.2. Facade Features

House 4 has two facades, one facing the street and the other facing rear-adjacent structure. Its front facade is asymmetrical. The door of the house which can be reached with two stairs treads is one of the important symbols of traditional architecture of Ayvalık houses. The main entrance door and the warehouse entrance door of the building

have been renewed as an iron door. The doors, joinery and knockers of the building retain their original features. The windows are rectangular and woodwork but poorly-maintained; the original wooden shutters of the building are not present.

4.4.3. Construction Features

The House 4 is made of 50-60 cm thick walls on rubble stone foundation. Rubble stones are used on the exterior walls while cut stones are used on the walls corners. Wooden beams and wood covers are used on floors and ceilings and the partition walls are made of wood with plasterboard and the windows are made of rectangular wooden lintel. The exterior facades were replaced with cement plaster instead of lime plaster which deteriorated over time. The exterior and interior facades of the building do not preserve their original textures and no restoration was made. Considering the "space, facade and construction" features of House 4, it is observed that the original texture of the building is not preserved; ever time it changed hands, it was subjected to different restoration methods and materials. And as it has seen no restoration in recent years, there is some degradation (Table 4). The building needs to be renewed, adhering to its original texture.

Table 4. House 4 (Door number: 34) Details

Details of the Building		**Interior and Exterior Images of House 4**
Building Name-No	House No. 34	
Construction Year	1891	
Location	Ayvalık	
Neighborhood	Hayrettin Paşa	
Plot No	298	
Parcel No	2	
Floor area	54 m2	
Number of floors	Ground floor First Floor Second Floor (backyard)	
Original Function	Residence	
Current Function	Residence	
Building materials	(Stone, Brick, Wood) Ground Floor: Stone First Floor: Stone Second Floor: Brick Flooring and ceilings: wood	
Construction Technique	Masonry structure	
Plan Type	Central Hall	

Figures 67-79. House 4

4.5. Evaluation

As a result of the examination of 20 traditional residences and 4 traditional residences in detail according to the "location, facade and construction" features that clearly reflect the traditional Ayvalık residence;

Space Features

The space plans of the traditional houses shaped under the period conditions vary according to the housing types. Traditional Ayvalık houses are built on a square or rectangular parcel, adjacent to the street and high-walled side courtyard or backyard. It is seen that the interior layout is planned according to type of the hall of the traditional house. The buildings which have two or three floors were built in Neoclassical style. The houses have an entrance door opening to the street or if they have a store, they have two doors. The buildings with the second entrance were generally used as the storage area of the house, which is called the store/shop. As there is a storage area on the ground floor of the buildings, living areas are generally planned on the upper floors. The department, called the shop, was an area that was used for such needs as laundry, cistern, well, and cellar when it was first built, but they were turned into shops over time but they are idle today. In the houses with two entrances, besides the shop entrance on the ground floor, the second door is generally opened to the main staircase of the house and the store is on the ground floor. On the upper floors of the houses, there are usually sleeping and living areas, kitchen and bathroom/WC. There are living, kitchen, bathroom/WC on the ground floor of houses with a single entrance and there are sleeping and living areas on the upper floors. At first, WCs were in the back garden, in the side yard or backyard, but over time, these WCs were demolished and planned on the upper floors. While the staircases inside the house connect the floors, they are the elements that connect the entrance door directly to the upper floor in the buildings with two entrances. Some houses have entrances directly opening to the hall. Cabinets in niche, cooking areas, colored walls, colored ceilings and wooden materials are frequently used in interior spaces. In this sense, it can be seen that the structures examined, although partially, retain their original space features.

Facade Features

The houses generally have two facades, one facing the street and one facing the garden. The facades of the building are generally asymmetrical. Structures which have 1 or 2 floors were built in a Neoclassical style in an adjacent order. Doors of the Ayvalık houses are an important symbol of the building. A wrought iron showing the date when the building was constructed and monumental door knockers are on the flamboyant, arched or flat lintel wooden doors in a high niche which are entered through stairs. Some houses have one entrance door, and others have two entrance doors. Although the old doors with monumental value are partially preserved, most of them have been replaced with iron entrance doors due to thefts and unconscious use and also due to the fact that the iron doors are deemed to be more secure. In addition to the door, other elements that add meaning to the facade are balconies, sills and windows. Wide and high, jamb-free,

frameless windows, which are generally rectangular in shape, are widely used in facade arrangement in order for the building to benefit from natural light. There are generally no windows on the ground floors; however, in some houses, it has been observed that a window measuring 20x20/30x30 cm was made after renovation. The windows on the ground floor are a result of the illegal renovations by the homeowners. The original windows of the houses are those on the upper floors. The original windows usually have two wooden wings, but in time, they were replaced with metal windows due to corrosion and degradation of the wood parts of the windows. The large and long windows on a single facade of the house were combined together over time to form a single window and lost their originality. Structural deterioration is frequently observed in door and window joinery, especially since wooden craftsmen are not conscious enough about the historical structure. Although the balconies rarely show up on the front facade, there is usually a closed balcony on the upper floor's rear facade. The balconies, which rarely appear on the front facade, consist of either ledge or narrow areas surrounded by wrought iron. As the houses examined under this study are adjacent structures, either the gardens or the balconies of the adjacent houses are commonly used. The balconies in the rear facade are closed due to the fact that the balconies face each other. The upper floor's closed balconies face each other due to their adjacent order and do not have the external view. In this sense, it can be observed that the structures examined, although partially, retain their original facade features.

Construction Features

Ayvalık houses are made of 50-60 cm thick walls on rubble stone foundation. Although many of the traditional Ayvalık houses have been demolished due to neglect, thick stones still preserve their basic features. The original texture of lime plaster on the facades made of rubble stone and cut stones were replaced with concrete plaster due to the wrong use of lime plaster. The original lime plaster on the exterior facades was removed in time and cut stones were exposed on the surface of the buildings. The original lime plaster or stones were replaced with the concrete plaster due to unconscious modifications. The floor and ceiling tiles of the buildings are wooden beams and wood covered, the partition walls are usually brick. Stones were generally used on the facades of the building, the stone texture was left untouched due to the destruction of the plaster on the stones, but it has been also observed that the natural stones in some houses were painted. Due to a lack of restoration resulting from the economic situation of the local people, there are some cracks on the roofs and upper floors and in time, these cracks spread to the whole building. As a result of the fact that these houses have changed many hands, there is some degradation and distortions in their historical fabric.

It has been observed that while a small number of buildings still preserve their original features, many of them have not seen any restoration due to environmental factors and economic conditions of the local people and there are some degradation on the roofs and upper floors. There are also construction errors due to wrong material preference and unconscious and insufficient workmanship.

5. Conclusion

Traditional residences are important resources for the cultural and architectural development of social life. When environmental values come together with different cultural architectural features, they serve as an object of traditional texture. Thanks to their physical, cultural, social and economic conditions, they carry many values in terms of both their geography and cultural development. The district of Ayvalık is an important district with its historical and cultural texture and structures that can be an example of traditional residential architecture and Ayvalık's traditional architecture is an integral part of its geographical location. In this context, the houses examined within the scope of the study are important transmitters of the social, cultural, historical reflection of the traditional Ayvalık housing and architectural traces.

The fact that today's residents do not have much information about historical identity of the houses causes destructions in the original texture of the structures as result of their daily needs in these houses. Many buildings are supervised by the Board of Monuments, but many houses have been destroyed or abandoned due to changes made by residents without permission. Due to this abandonment and negligence, most of the structures were destroyed over time. Some homeowners have performed renovations by partially adhering to the original texture of the structures. Accordingly, it is necessary to re-function the structures in accordance with their first-use purposes and to analyze the structures by experts. In addition to environmental factors, structures are damaged due to a lack of maintenance, economic situation of the local people, their changing hands frequently, and inadequate control. Ayvalık, which embodies different life styles as a result of cultural structure, lack of control, constant change of demographic structure and population exchange, is becoming a city where socio-cultural degeneration is experienced especially due to the increasing tourism pressure. The appeal of new living spaces and tourism also causes new constructions to be built without considering the historical texture. The use of many historical residences as boutique hotels and daily pensions has increased, thus, the buildings have started to lose their originality and traditional texture. Traditional Ayvalık houses face unconscious use due to increased commercial and tourism concerns. In an effort for these 19th century houses to keep up with environmental factors, changes have been required in the traditional Ayvalık houses. They require mandatory restorations especially due to the deterioration in indoor and outdoor spaces.

In conclusion, traditional Ayvalık houses can maintain their continuity with conscious use and necessary controls, and continue to preserve the identity of the historical city. However, it is necessary to carry out frequent inspections by the Board of Monuments, to regularly inspect the buildings, to ensure expert architects, restorers and workers work together in necessary renovations and to raise awareness of the homeowners. In this way, the historical and cultural value of traditional texture of the traditional houses can be carried to the future.

Acknowledgment
I would like to offer my heartfelt thanks and appreciation to homeowners, especially Mr. Birol Köseoğlu for their help in relation to the on-site examination of Ayvalık houses examined under the study and information and interviews about the houses, photos and housing plans of the houses.

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