Int. Journal for Housing Science, Vol.34, No.1 pp. 65-77, 2010
Published in the United States

OBSERVATIONS ON CHARACTERISTICS OF SUBURBAN HISTORICAL HOUSES OF IZMIR

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ABSTRACT

The aim of this study is to present the changes in building characteristics resulting from the transformation of Izmir into a cosmopolitan city of wealthy traders in the second half of the 19th century. The study concentrates on palatial suburban houses. The paper concludes with the construal of the merging of the old and new architectural preferences as a sign of modernization.

Key words: Heritage, Ottoman, 19th century, Historical Houses.

Introduction

Anatolian cities were subject to transformations due to the modernization that took place in 19th century Turkey. Extroverted spatial organizations began to be preferred over introverted ones in residential architecture. The construction technique of combining timber frames and masonry in a single wall, the contemporary building elements and material gave way to a new building system. The awareness that these houses are listed as cultural objects in Turkey will go to make a considerable contribution towards the protection of the country's rich cultural heritage.

0146-6518/01/ 65-77, 2010

In this context, this study aims to present the changes in the spatial preferences, the building methods and materials as a result of the modernization of the Ottoman Empire. We focus on Izmir, which played a central role in the country as a cosmopolitan city of wealthy traders in the second half of the 19th century. The material signs in the estimable suburban districts of Izmir; namely, Buca and Karsiyaka; where affluent Levantines and rich Turkish families settled are delineated. The study concentrates on palatial houses that were surrounded by gardens and are now deemed buildings of cultural heritage.

The criteria for selection of the examples discussed in this study are (a) the locality (the outskirts of Izmir where modern design principles and construction techniques of the 19th century were practiced), (b) diversity of owner ethnicity (one each Levantine and Turkish dwelling), (c) perceptibility of the original building system and elements (one because of fire damage and the other because of lack of maintenance), and (d) availability of measurements and related information in a single building drawing. Conventional techniques were employed in the surveys and to evaluate the buildings (1, 2) using the scaled 2d drawings, partial axonometric drawings illustrating the building systems, and photograph albums that were produced. Detailed measurements of the first floor and the roof of the Levantine house could not be taken because a fire extensively damaged it in 2006.

Characteristics of Residential Architecture in the 19th Century Europe

Growth of commerce in the 19th century, endowed the middle classes in Europe with growth in their power and numbers (3). Middle class houses of that period expressed the 19th century theories of architecture eloquently. The design principles of these houses were drawn from a variety of architectural sources. First, the asymmetrical half-timber vernacular of the sixteenth and seventeenth centuries with bay windows were adopted as the basis (4). It is known that the art of timber framing achieved was at its most impressive in range and degree of expertise in northwestern Europe during the Middle Ages (5). On the other hand, the houses of those times were chaotic in the display of their architectural elements. In the 19th century, however, these architectural elements were assembled into studied, sophisticated compositions. The second architectural source that deserves mention in a discussion of the 19th century residential architecture is technology, which provided industrial materials along with new techniques of construction. Third, historicism was the primary stylistic medium of the period. There are many instances exemplifying the eclecticism of materials and structure as well as of historical styles. Nevertheless, Neoclassicism became the international trend that spread throughout the world (4).

Characteristics of Traditional Houses in Anatolia and the 19th Century Developments

The traditional houses in Anatolia were mostly constructed after the 17th century. These introverted houses were examples of a shared life style of different cultures extant in Anatolia during the Ottoman period (6, 7). The major spaces of Anatolian traditional houses were the courtyard, the 'hayat', living rooms and service areas. The ground floors of houses were dedicated to the services and the upper levels were reserved for the living quarters. The design concept of the traditional Anatolian house was centered on the relationship of the hayat and rooms. The hayat was a fully developed riwaq on the first floor. It was a kind of a hall intended to provide space for the open air activities of the household. The rooms, which were accessed from the hayat, were multi-functional living units (8). The kitchen and the storage spaces were mostly positioned as a separate unit in the courtyard. The lavatory was situated in the courtyard as well (6).

The traditional houses of Anatolia used composite systems of construction. Load-bearing wall systems were preferred at the foundation and ground floor levels with timber frame systems on the upper floors and the roof (6, 9). Load-bearing walls, carrying some architectural elements like the fireplace, ablution spaces, and cupboards, may extend up to roof level and are generally referred to as service walls (6). Research results have presented that the timber-framed parts of these traditional houses in Anatolia suffered the least damaged structures after major earthquakes (9).

In the 19th century, closed, centralized, compact, and extroverted forms were invested with an exalted status in the belief that they were more modern (8, 10, 11). Ground floors could also be used for living activities and they duplicated the plans and layout schemes of the upper storeys (11). There were two main types of plans: one with long central halls having rooms on both sides and the other a cross-shaped central hall with rooms situated at its corners. (8) Neo-Classical elements (12) such as pilasters, casings, iron entrance doors, which were generally elevated and flanked by windows; monumental stairs, flower rosettes as ceiling center pieces and cornices were added to the decoration program. Mobile furniture was preferred instead of built-in furniture (6). Window sizes were large and top windows came to be omitted with the availability of glass (11, 8). The kitchen and the storage spaces were placed as separate spaces on the ground floor; the lavatory was situated within the house (6).

In addition to the experiments with the urban houses at the city's center, the possibilities offered by the advent of railroads in metropolitan settlements such as Istanbul and Izmir during the late 19th century gave way to a new suburban typology. These relatively spacious houses of the affluent families were two or three storied buildings surrounded by gardens. They resembled western villas with their terraces, balconies and picturesque supplements enriching open spaces (11, 8).

Izmir in the 19th Century

During the modernization period of the Ottoman in the 19th century, the cities merged with their surroundings because of development of the transportation network. Harbor cities were privileged in such development (13). In the 19th century, Izmir harbor was evaluated as the most important in the eastern Mediterranean region (14). So, the city felt the influences of modernization strongly, and long before other Anatolian towns did (7). International trade and the reforms initiated by Mahmut the Second played critical roles in imparting to Izmir the perception of a modern city of the 19th century. The establishment of railways connecting the city to its hinterland starting in 1858 and completion of the new harbor in 1872 were important landmarks in its development (12).

The city had become for foreign merchants a major center for purchase of the agricultural produce and raw materials of Anatolia. Many of these merchants, known as Levantines, settled in the city (15). There were also Turkish merchants whose occupation was transportation of the local products to the harbor, and of imported products to the Aegean settlements (16). New suburban districts associated with the transportation network also formed. Merchants of different ethnic origins settled in these districts. Buca, Seydikoy, Karsiyaka and Bornova (16, 17) were some of the new housing neighborhoods that emerged in the second half of the 19th century. They were organized as districts in the gridiron pattern. Palatial houses that were surrounded by their own gardens (15, 12, 18), and modest houses attached to each other in order of rows were both types built in these suburbs (19). The palatial houses were two-storied buildings consisting of main and service portions. In the extroverted main portion, the ground levels were for receiving guests and the first floors were for family living. More elaborate architectural elements were preferred at the ground levels. They were all in the contemporary Neo-Classical style (18). In fact, Neoclassicism became the accepted architectural design for spacious and palatial buildings (12, 8).

So; Izmir became a major consumer of contemporary European construction materials as well as a rapidly developing harbor city (20). The industrial building materials that were imported from Europe were timber, timber flooring, nails, window glass, iron, bricks, cement blocks, cement, roof and floor tiles, and paints (14). The way these imported materials were utilized can be observed in the palatial suburban houses, which were state-of-the-art constructions of that period.

On the other hand, closer observation of the construction techniques of the 19th century houses in Izmir reveal that the composite system was interpreted differently when compared to the traditional application of the system in Anatolian houses. The masonry walls in Izmir constructions were reinforced with interior cores of timber frames (21). It is known that timber has been used as binding and reinforcing material especially in rubble stone masonry buildings in Anatolia since 3000 BC. Timber was

placed longitudinally, transversely and, vertically in the ancient masonry buildings. In later periods, horizontal placement of timber continued, but vertical placement is not observed within masonry walls (22). So, the walls combining the advantages of masonry and framework systems may be treated as a peculiarity of the 19th century buildings in Izmir.

The Case Study Houses

The first case study is of a Levantine building in Buca, which is a historical district of Izmir located on its southeast plateau at a distance of 9 km from the city center. Starting in the late 17th century, it had become a suburb mostly preferred by the Levantines of English origin (17). After the integration of Buca with the railway network connecting Izmir to its hinterland in 1870, the settlement grew extensively (16). The majority of the Levantines left their settlements in 1950s, and today, the Turkish population is dominant (23). The house studied is located in the city's urban conservation area within the borders of Dumlupinar district, between the 117th and 119th streets, in block number 114 and lot number 2; it has its origins in the 1870s. Its present owner is the Social Insurance Council of Turkey. There was a fire in the building in 2006; so, it is in a state of ruin, but many of its original elements can be still discerned.

It is a two storied extroverted building consisting of rectangular main portion (18.42 x 9.73 m) in the southwest part and an L-shaped service portion (9.40 x 14.53 m) in the northeast juxtaposed with each other in a large garden (2246 m^2) (Fig. 1.). A rubble stone garden wall 70 cm in height and crowned with iron railings permits a view of the front garden. The gate is a double leaved, decorated iron door with stone columns at its sides and gives way to a pedestrian axis (w: 1.95 m), complete with the original seating arrangements that existed, a pool, a well and pine trees by its side. The other end of the axis terminates with the elevated entrance to the main portion. The present colonnaded portico in front of the entrance is a reinforced concrete structure and was added after the removal of the original balcony above the bay window south of the entrance. This is double leaved decorated iron door with glass panels and opens into a rectangular hall (4.30 x 8.60 m). Three rooms, an ornamental staircase, and the kitchenette are all reached from this hall (Fig. 2) which is equipped with the niches, pilasters, cornices and, ceiling ornamentations.

Figure 1
General view, Levantine House

Figure 2
Ground floor plan, Levantine House

Figure 3
First floor plan, Levantine House

The first floor hall (10.30 x 2.95 m) is placed perpendicular to the ground floor hall and is terminated by the staircase and a bathroom at its two ends (Fig. 3). There are four bedrooms with entry from the hall and all have a view of the front garden. The present bathroom at the northwest used to be a terrace originally reached from the hall. The decoration of the spaces here, which are extensively ruined today, was plainer compared to that on the ground floor (24).

The service portion (Fig. 2) entered from the rear garden is arranged around a service hall giving way to a service room and the kitchen, which is divided into two sections

at present. There is an entrance to the kitchenette from the kitchen. The original wooden staircase linking the service hall to the upper storey has been removed. Thus; at present the only entrance to the upper part of the service portion, which is composed of a series of rooms leading from one to another, is from the landing of the ornamental staircase of the main portion.

The walls of the plinth (h: 50 cm) underneath the main portion are rubble stone masonry (66 cm thick). The exterior walls on the ground and first floors in both portions are of the composite system (52 cm thick). They consist of rubble stone and brick masonry on the exterior and an interior timber framework system with rubble stone and brick infill. Reinforcement with dressed stone slabs is visible at the exterior corners. The interior walls (18 cm thick) are of timber frames. They are covered with wooden-and-lath substratum and plastered on both sides in both portions.

The exterior and interior surfaces of the building are covered with a double layered plaster system composed of a rough layer (2 cm thick) covered with a fine one (1 cm thick). They are both of lime plaster reinforced with straw, although this could not be examined by laboratory analysis. In the living spaces on the ground floor; wooden paneling (88 cm above the ground level and 13 cm in height and 1.5 cm thick), decorative wallpaper (62.5 cm in height) underneath this paneling, and timber base boards (26 cm in height) are visible. Molded plaster cornices, ceiling center rosettes, and ceiling corner pieces fashioned out of gypsum are the ornamental elements of the ceiling. The richness of ornamentation on the ceiling symbolizes the importance of its space. At the plinth level, joists are exposed without any covering In the service spaces, the lath-and-plaster technique is applied without any ornamentation.

The floors and the roof are of timber-frame pattern in both portions. Timber floor planks are the covering material used in all the rooms and the upper storey hall in the main portion. In the rest of the spaces, the floor coverings seen are as follows: Concrete tiles (20 x 20 cm) in the main entry axis in the garden, hexagonal ceramic tiles (15 x 15 cm) with motifs in front of the main entrance, white ceramic tiles (20 x 20 cm) in front of the service entrance, gray and white marble slabs (52 x 52 cm) placed diagonally in the main entrance hall, ceramic tiles (20 x 20 cm) with motifs on all of the ground floor spaces of the service portion, and on the bathroom walls on the first floor white ceramic tiles (20 x 20 cm) with the insignia Czechoslovakia printed on their underside. Marseille-type clay roof tiles with bee insignia have been found. These tiles are most probably the original tiles which were then designed and produced in Marseilles (20).

The house echoes the contemporary sprit through the following characteristics: The preference for axial symmetry in the spatial layout of the front garden and the ground floor; the picturesque characteristics of the front garden with its decorative elements such as the gate; the pool with seating elements; elements of the Neo-Classical facade such as casings, cornices, and pilasters, the large windows (96 x 238.5 cm) on the

ground floor giving a view of the street, a compact plan and spatial arrangement; the emphasis on the third dimension (h: 4.5 and 3.75 m on the ground and first floors, respectively); the bay window in the dining room, the proximity of the kitchenette to the dining room, the decoration of the fireplaces with marble in both the living and the dining rooms, which are now ruined by vandalism; the pilasters in the hall, the ornamental staircase carved out of timber, the extensive amount of stucco embellishment in the main rooms such as the ceiling centerpieces and cornices; the provision of wooden paneling and wallpaper; absence of built-in furniture; and utilization of imported building material.

The second case study is the Latife Hanim House in Karsiyaka, a coastal settlement north of the Izmir bay, across from the city's center. The decision to integrate Karşıyaka with the railway network of the region, which was completed in 1865, enhanced the preference of Karsiyaka as a residential area by the Levantines and rich Turkish families. Sadik Bey, the owner of the case study house in Karsiyaka, was a rich Turkish merchant engaged in transportation of goods between Izmir harbor and the Aegean towns (16), and was the grandfather of Latife Hanim, who was Kemal Ataturk's wife (25). The family owned a house in the city center. The house now under study was built as the second house of the family a few years before 1860. It fell into a state of ruin for of lack of maintenance until 2005. Its present owner is the Karsiyaka Municipality, who has recently restored the house. Now, the building functions as the Latife Hanim Memorial House.

It is a two storied extroverted building composed of a rectangular main portion on the west (14.50 x 9.00 m) and a service portion on the east (7.30 x 9.00 m) juxtaposed next to one another in a large garden (2900 m^2) from across Karsiyaka Railway Station. The rubble stone garden walls are crowned with iron railings and lets the outsiders an unhindered view of the front and the rear gardens. The front gate facing the railway station has double iron leaves and is accentuated by stone columns at its sides. It gives way to a pedestrian axis lined by various trees and leads to an iron arbor. The other end of the axis is terminated with an elevated terrace and the double leaved, decorated iron doors with glass panels (Fig. 4). This door opens into the rectangular hall surrounded by three rooms on its long sides (Fig. 5). This layout scheme is repeated on the first floor (Fig. 6). Both the ground (4.10 x 7.80 m, h: 4.15 m) and first (4.10 x 8.15 m, h: 4.00 m) floor halls are decorated with niches, pilasters, cornices, and an ornamental staircase. The kitchenette on the ground floor and the bathroom on the first floor are also reached from this hall. The link to the service portion is provided through the doors in the stairwell at the ground floor and the partial mezzanine floor, which is reached from the landing of the staircase. The service portion has undergone extensive renovation.

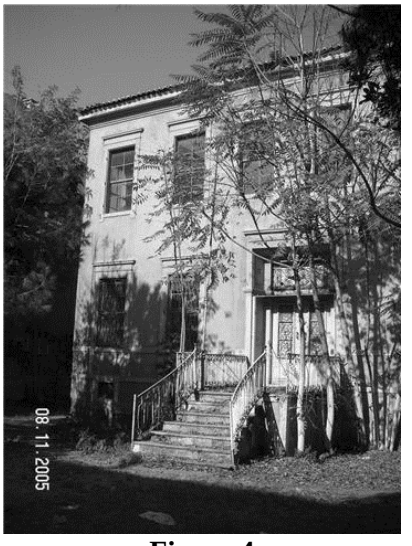

Figure 4
Entrance facade, Latife Hanim House

Figure 5
Ground floor plan, Latife Hanim house

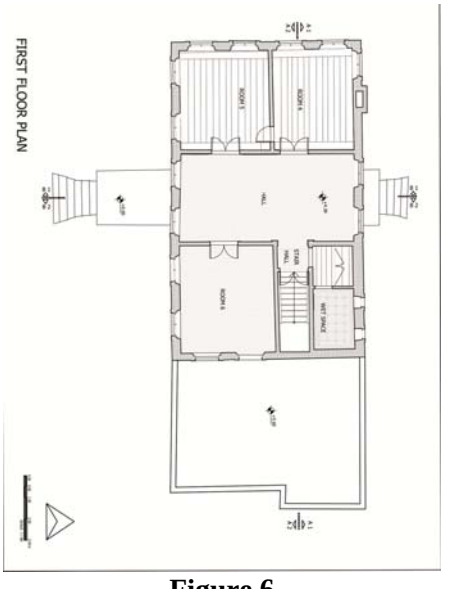

Figure 6
First floor plan, Latife Hanim House

The walls of the partial basement underneath the main mass are rubble stone masonry (60 and 45 cm thick at the exterior and the interior, respectively). The walls of the storage spaces have no plastering and are exposed, and those in the living areas are plastered. The exterior walls of the ground and first floors are of the composite system (45 cm and 38 cm thick at the ground and first floors, respectively). Exterior portions

are composed of rubble stone masonry, and the interior parts are timber-framed with rubble infill on the ground, the partial mezzanine, and first floor levels. The interior walls (20 cm thick) are timber-framed. The infill is rubble stone on the ground floor, whereas wooden lath-and-plaster technique is preferred on the first floor. The exterior surfaces of the building are cement plastered at present, and those of the interior are of mud plaster reinforced with straw and lime, again not confirmed by laboratory analysis. The halls and the rooms on both floors have timber paneled boards 70 cm above the ground level and 15 cm in height and 1 cm in thickness and timber base boards (12 cm in height). Decorated wall paper (55 cm in height) sandwiched between these boards is visible in some of these spaces.

The floors and the roof, which could not be examined in detail, are in timber frame technique. The roof is covered with Turkish type of clay roof tiles. The ceilings are generally timber covered in the living areas. The lath-and-plaster technique is applied only on the ceilings of the hall on the first floor and the staircase. Here, ornamental plaster made of gypsum has been chosen to form molded plaster cornices, ceiling center rosettes and ceiling corner pieces. They are left exposed without coverings in the service areas of the basement. Dressed stone slabs have been chosen to cover the floors of the basement spaces and the two terraces. The floor of the ground hall is decorated with black and white marble slabs (50 x 50 cm) placed diagonally. The floors of the rooms on the ground, mezzanine, and first floor levels as also the floor of the first floor hall are covered with timber, although there is some minor renovation. Ceramic tiles with motifs (20 x 20 cm) are preferred for the bathroom of the first floor. The service portion, which is partially stone masonry (59 and 43 cm thick at the exterior and interior, respectively) and partially brick masonry (20 cm thick), is extensively renovated. Its floors are now reinforced concrete.

The house reflects its contemporary flavor with the following characteristics: The orientation of the main entrance toward the railway station; the presentation of the front and back gardens with their picturesque elements such as the arbor, seats and various trees; the organic form of the entrance terraces and their elevated positioning; the lighting fittings on the front terrace; the Neo-Classical casings and cornices of the facades; the large window openings (1.10 x 2.20 m); the garden and the street visible from the ground floor; the preference of axial symmetry in spatial layout of the garden and the interior spaces of the main portion; the compact plan organized around a long central hall on both floors; the accentuation of the third dimension (h: 4.15 m at the ground floor and 4.00 m at the first floor); the positioning of the kitchenette on the ground floor of the main portion; the marble covered fireplace in the living room; the floor of the ground floor hall covered with black and white marble slabs placed diagonally; the pilasters and arched niches in both of the halls; the ornamental staircase carved out of timber; the stucco ceiling decorations; the presence of timber cornices and wooden paneling; the presence of a bath on the first floor; utilization of industrial building fittings and materials such as timber balustrades, wallpapers, timber and iron door leaves, glass window panels, iron grills, and kitchenette

cupboards and tiles. Nevertheless, there are a few elements that recall tradition: a built-in closet in one of the ground floor rooms; the presence of a bathing chamber with a stone washbasin and ceramic water pipes exactly as in a Turkish bath in the basement. In short, there is a duality in the interior architectural elements of the house: both modern and traditional artifacts being present. Nevertheless, the traditional ones are only a few in number, and are located in the secondary spaces.

Conclusion

This paper focuses on the architectural characteristics of palatial suburban houses in late 19th century Izmir. The compact building forms, single functioned spaces such as the living, dining and bedrooms, and utilization of contemporary building elements and materials such as wooden panels, wallpaper, kitchenette cupboards, window glass, lighting fittings and tiles document the attempts at modernizing the then prevailing domestic culture. They derived their character from their large, picturesque gardens, Neo-Classical elements, axial organizations, opening of their ground floors to the street, the balconies and bay windows, long central halls surrounded by rooms, and wet spaces integrated with the main portions. These houses of the merchants of various ethnic origins were well-organized, up-to-date buildings.

The reinforcement of masonry walls with framework interior cores should be accepted as a peculiar design solution that is uniquely different from the characteristics of the traditional Anatolian houses. The walls were finished by application of plastering; or by covering them with casings, pilaster, cornices, wooden panels, wallpaper and baseboards.

Neither national nor religious persuasion were factors that influenced the extroverted character of the house nor the preference of the Neo-Classical style, the contemporary building elements and composite construction systems. However, the duality of the modern and the traditional could be ensued in the interior architectural elements with the change to Turkish ownership of the house.

Both of the house plans studied do not have the basic dualism of the traditional Hayat House of Anatolia, which stems from the tension between the semi-open and semi-private hayat and the closed and private rooms. There is similarity between the two styles in some morphological elements such as halls, rooms, fireplaces, niches, built-in closets and bathing chambers. They, however, differ radically in their functional concepts, sizes, forms, amounts or positions. The late 19th century architectural features were partly borrowed from Europe, but were also the outcome of the new cultural developments in Izmir.

Hence, the houses in Buca and Karsiyaka may be viewed as symbols of the appropriation of the modern building techniques that merged with the traditional architectural knowledge of the country.

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