COMPARATIVE ANALYSIS OF 19TH C DWELLING ARCHITECTURE IN TURKEY AND BULGARIA

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ABSTRACT

In the past centuries, construction of houses and great public buildings and structures used to be a craft with guild rules and typical dissemination in the region of Balkan Peninsula and different zones in Turkey. We do today admire the majestic residential houses that survived the centuries and could later be restored to be seen in our cities. In the paper, an attempt is made to compare the architectural features of 19th C House in Bulgarian cities, such as Koprivshtitza, Plovdiv, Melnik, etc., to Turkish House, in regions such as Edirne, Bursa and Goynuk. The comparison criteria considered are as follows: Factors for the Development of Architectural Type of Houses (Climatic Considerations, Religion, Livelihood, etc.), Exterior Architectural Image; Interior Organization of Spaces and Furnishings; Building Regulations and Limitations. The goal of the paper is to establish vernacular differences and discover similarities, as an important source of better understanding the spread of architectural types in the past.

Key words: residential architecture, national heritage, building tradition.

BULGARIAN HOUSES: INTRODUCTION

The Late Revival Bulgarian town house (1830–1878) has been particularly well studied and documented by the researchers of the 20th C. Monuments rebuilt and reconstructed and restaured as a result of this research constitute national pride and treasure, as proof of the talent and artistic achievement of Bulgarian master-builders, woodcarvers and painters from the 19th C. If we were to describe this architecture shortly, its most typical feature was symmetry. Concerning the architectural influences and origin of the style, Bichev 1955, came to the conclusion, that Bulgarian houses of Late Revival period are Baroque houses: he objected to Chr. Peev 1956, that they were influenced by Italian Renaissance. As major proof, architectural spatial composition was given, which followed Baroque features: dynamic composition, clearly defined single axis or two axes of symmetry, concave-convex lines or 3D surfaces, present in architectural elements such as bow pediments, jetties, oval reception hall, etc. Later Kojuharov, Angelova 1971, object to this qualification, pointing out that Revival houses originated and genetically developed from symmetrical houses in the Bulgarian tradition and belong to an original national style with only certain references from 19th C ecclectic developments.

1. FORMATION FACTORS

1.1. FUNCTION

Late Revival Town houses were built according to representative *requirements*, being owned by great merchant or banking families. The ground floor was used for living all the year round; while the upper storey was used for great gatherings of people on festive or family occasions, such as baptizing, marriage, etc. The representative storey had a symmetrical composition, consisting of a central hall (‘hayat’) flanked by two rooms on each side, used for guest recep-

tion, ‘ladies reception’, study for the owner, etc. Usually in the big hall, a place for musicians was secured (a platform, or kioshk in one end), to entertain guests.

1.2. TERRAIN AND CLIMATIC CONDITIONS

Two types of site planning solutions were possible, according to Chr. Peev 1960. 1. The house overlooked the street, when the building lot borderd the street line, and had its offical entrance directly from the street 2. The house was of a freestanding type, surrounded by a larger building plot, developed as a garden. The main gate was set in the high wall surrounding the plot, and from there the visitor could enter the house from a stately entrance door under a bow-pedimented portico. Climatic conditions in Plovdiv allowed the houses to be built of the half-timber structure, because of the considerably higher summer temperatures, the walls did not have to be too thick. People used the basement (which was stone-built) as basic dwelling space (including in winter), the upper floor was kept as representative space, and being warmed with fireplaces accordingly.

1.3. STRUCTRURE AND MATERIALS

The houses were of a mixed structure: basements were built of stone masonry, while the upper floors were of the half-timber type, meaning the walls had vertical wooden structural members (posts) spaced approx. 70 to 80 cm, forming bays filled with mud bricks or stone rubble, and the wall thus formed was plastered on both sides, with the facade decorated with beautiful wallpaintings. The windows were set in slightly wider bays (1,00–1,10 m after Chr. Peev 1956), grouped by two or three to form a compositional element on the facade. The house was covered by a wooden roof structure with wide overhanging eaves, covered by ceramic tiles/roof slate slabs in mountain areas. The use of wooden roof structure developed rather big structural bays: Koyumdjioglu house in Plovdiv, with its upper floor hayat measuring 7 by 11 meters ellipse; The Big House of Arie in Samokov, a real palace, torn down in 1947: had a hayat measuring 27 by 7,60 m.

1.4. ARCHITECTURE AND COMPOSITION

Late Revival residential architecture falls into two major types: single- storeyed houses; and two or more storeyed houses. The first type had a stone-masoned basement, partly dug out in the terrain, usually used as storage area or summer kitchen and bath or other purposes. An entrance was reached by two symmetrical flights of steps, reaching a landing, approx. 1,0–1,50 m level above the court. Under this landing, a central door lead down to the basement with a flight of steps. After climbing the entrance steps one enters a large vestibule with a ceiling, higher than the adjacent rooms, with a stately and ornamented woodcarving, with a central ‘sun’ – applied wooden rosette. This hall had a rectangular, oval/elliptic or round form. The two storeyed house had a considerably lower stone basement, a central hayat reached by a stately entrance under a two or four-columned portico, recessed to form an entrance niche, leading to a large ground floor hall, thus forming a strong axis to a beautiful symmetrical stair at the bottom of the hall. This stair consisted of two flights of steps, leading up to the larger and higher hall upstairs. This one followed the rules listed above: elliptical or round form, a ceiling higher than the adjacent rooms. A wooden ceiling culminates the composition with a central rosette symbolizing the sun. The adjacent rooms were symmetrical on both

sides; their doors flanked decorative niches in the concave walls of the hayat, pointing out a secondary axis, perpendicular to the major one. Bichev 1954, points out the dynamic composition, alternating different spatial elements to culminate in this room.

INTERIOR DECORATION AND FURNISHING

Wood carving was the most attractive element to form the basic surfaces of the interior: ceilings and walls. A large framed surface formed the ceilings, built of wide planks and decorated with shaped thin wooden slats, decorated in the center with a rosette, made up of a circular arrangement of separate carved elements to form a sun. A large concave plastered cove was painted with round twigs and flowers in the Renaissance tradition. Wood carving decorated the built-in cupboards in the walls with doors richly decorated with carved panels and shaped frames. In the center, a decorative arched niche was set, with a wooden or marble horizontal top and wall-paintings with fantastic architectural landscapes, flower vases, faraway exotic sea ports, palaces, gardens. Traditionally, furnishing consisted of built-in seating under the windows. The windows were framed both from the inside and on the facade with wood frames, crested with bow pediment. Walls were decorated with painted ‘pilasters’with capitals, dividing the surface into decorative panels with landscape paintings. Floors were covered with rugs. Imported furniture from Vienna or Paris formed groups according to the room’s function: armchairs, sofas, tables; or writing table with armchair, etc.

Fig. 1. Argir Koyumdjioglu House in Plovdiv, Façade.

Fig. 2. Argir Koyumdjioglu House, Hayat of the upper storey.

Fig. 3. Dimitar Georgiadi House in Plovdiv, Street Façade.

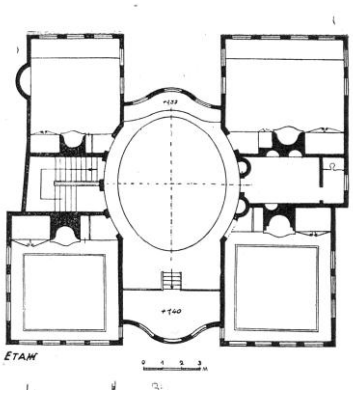

Fig. 4. First Floor Plan, D. Georgiadi House.

Fig. 5. Georgi Mavridi House (Lamartin House) in Plovdiv, Street Façade.

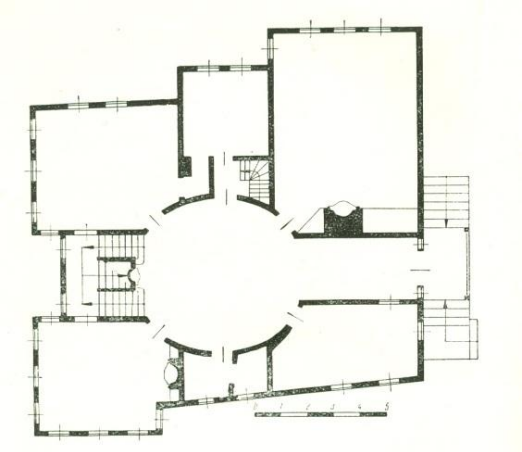

Fig. 6. Mavridi House Plan of the First Floor.

Fig. 7. Kableshkov House in Koprivshtiza, Yard Façade.

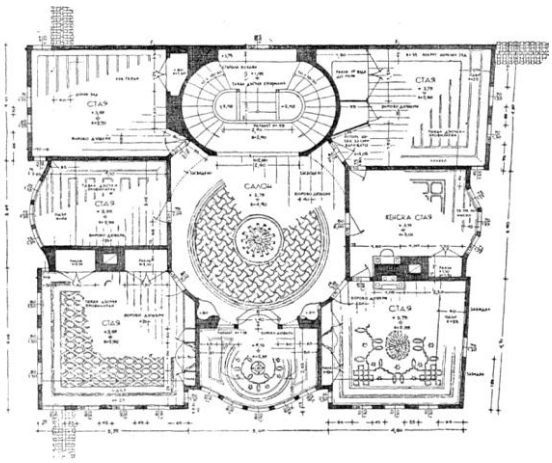

Fig. 8. Kableshkov House in Koprivshtiza, Upper Floor Plan.

TURKISH HOUSES: INTRODUCTION

The traditional Turkish houses started to be built in Anatolian cities in the 15th and 16th centuries and spread all over the Ottoman Empire. In different regions, different types were built, depending on the climate and geographical conditions, local resources and culture. S.H. Eldem stated, „*All these types, however, have certain characteristics in common which are invariably present in every specimen. Of these characteristics, it is the plan of the house which is the most important,*“ (Eldem, 1968). In fact, these houses, built in regions hundreds of miles away from each other and under different conditions, share almost the same plan schemes (Cagdas, 1996).

In major Ottoman cities of the 19th century, wealthy people resided large mansions called *konak* and palaces, which display a mixture of plan types and the influence of western architectural styles (Fig. 9). The two storey, timber framed Turkish house represented the majority, which was not influenced by extreme social conditions and which accommodated the middle class (Asatekin, 1994)

Fig. 9. A waterside mansion, Istanbul

Fig. 10. Sofa

2. SPATIAL PROPERTIES

The traditional Turkish house of the 19th century had two important stories: entrance level and the first storey, being the main storey, because of better air circulation and better Vista (Eldem, 1968, Sozen, 2001). The entrance floor was mainly used for subsidiary purposes (Cagdas, 1996). The main storey accommodated two major and one minor spatial elements, which make up the plan.

2.1. THE ROOM: THE NOMADIC HERITAGE

The room plans of the primitive Turkish houses have almost the same layout as the *yurt* or the tent of the nomad ancestors. The researchers state that the core of the Turkish house is the room and different plan types are developed based on that core (Kucukerman, 1991). Like in the nomad's tent, the room provides the optimum living conditions and there are no functional differences between the rooms. All the rooms are configured to include the sleeping, seating, cooking, eating and even the bathing facilities (Kose, 2005). One of the rooms may be designated for the use of the head of the household – although its spatial interrelationships are the same as the other rooms – is called the „Basoda", the main room (Toker, Toker, 2003)

2.2. THE HALL: SOFA OR HAYAT

Sofa (Fig. 10) is the place between or in front of the rooms, which is shaped by the number of the rooms and their layouts (Yurekli & Yurekli, 2005). According to Cagdas, „*the hall is the most influential element in the composition of the plan. The type of the house is determined directly by the shape and location of the hall"* (Cagdas, 1996).

2.3. EYVAN: IN-BETWEEN

Eyvan is a recess in between the row of rooms or an extension of the sofa, sometimes used as a protected sitting place or staircase. Yurekli & Yurekli describe the eyvan: *„Eyvan is an element of the main floor plan that is not functional in the practical sense, but makes the layout strongly readable and helps to strengthen the volumetric effect of the building. With its presence in the layout of the Turkish house, the eyvan is the clearest evidence that relates this house to the past. The most important function of the eyvan is to stregthen the hayat's identity as an in-between space. Especially in the four-room house type, the relation of the hayat with the garden and street is obtained by the eyvans. In this case*

the eyvan is the space in-between" (Yurekli, Yurekli, 2005).

3. PLAN TYPES

Plan types of the traditional Turkish houses are specified by the shape and location of their sofas within the layout:

3.1. WITHOUT A SOFA

The most primitive plan type is shaped by the presence of a circulation area, in most cases a courtyard, in front of the room or rooms in a row. Above the ground level, this area forms a balcony (Cagdas, 1996).

3.2. WITH AN OUTER SOFA

The next development stage of the house plan is the adding of an interconnecting hall with open sides and a covered top in front of the room rows. In later types, the sides of the sofa is covered with framed glass panels.

3.3. WITH AN INNER SOFA

This type consists of a long hall with rows of rooms on both sides. There are also various sub-types.

3.4. WITH A CENTRAL SOFA

Rooms on four sides of the Sofa form this type. This type is regarded as the last stage of the layout development. The shape of the sofa is either square or oval and some examples also have curved or chamfered corners. Eyvans are placed between the rooms to get the daylight. The variation with four eyvans brings out the most elaborate specimen of this plan type (Sozen, Eruzun, 1992).

4. STRUCTURAL PROPERTIES

Traditional Turkish houses are built with timber, stone and adobe. Choice of material depends local conditions and availability. The mountainous girdle around the middle Anatolian plateau and the Balkan peninsula host the typical traditional Turkish houses (Fig. 11). The coast line, east and southeast Anatolia are open to multicultural influences, therefore the vernacular houses in these regions represent a synthesis of various styles.

Timber is the main structural element in the Turkish house. The houses rise over masonry walls of the entrance floor that follow the lines of the spontaneously developed streets (Fig. 12). The upper storey layouts are supported with triangular or trapezoid jetties to form an orthogonal main floor plan (Yurekli, Yurekli, 2005). Unlike in the Western cities, the houses that form a street display a volumetric architecture instead of the architecture of façades (Yurekli, Yurekli, 2005).

Fig. 11. A Safranbolu house, Western Black Sea

Fig. 12. A street from Cumalikizik, Bursa.

The use of timber also enables fast construction work, a light construction system that also performs well in earthquakes. Dogan Kuban states: „*The main structural*

system in the Hayat houses was a timber skeleton used essentially over the masonry walls of the ground floor. This was neither a horizontal beam system nor a modern skeleton system. The connection between the horizontal and the vertical elements did not allow for continuity as in a modern structural skeleton. The continuity was not through the elements, thus linear, but it was like a box system where all the elements were integrated for the stability of the system".

The infill of the timber frame is also light, adobe or wattle and daub, which does not add much weight to the main structure.

CONCLUSION

Although they show some similarities, Turkish and Bulgarian houses differ considerably.

Religious reasons have brought about the differentiation between selyamlik (men's quarters), on the lower floor, and the haremlik (women's quarters) on the upper floor. In Plovdiv, the lower floor was used as living place, while the upper floor was a representative space.

Structure. Both house types were of the same half-timber type, because of the abundant wooden material in the past (the region of Western Black Sea coast was densely wooded). Frequent earthquakes were a factor for the half-timber structure, as well as climatic conditions (hot summer-cold winter in Turkey, very hot summers and mild winters in Plovdiv). Structural members were positioned at a shorter distance in Turkish houses. The filling material differs little – it was sun-dried bricks (mudbricks) or rubble or stones structrue in Plovdiv, same in Turkey. In Turkey, room height were much greater, probably for climatic reasons, to allow for a larger volume of air. In Bulgaria, it was lower. Sources quote a limit of about 3,00 m for non-Muslim population as a building rule in Istanbul. The second floor had double rows of windows, the upper row of a lower height, decoratively treated (stained glass), or without opening frames/shutters. In Bulgaria, this second row of windows survived today only in Kordopulu house in Melnik.

Plan. Turkish houses had a clear four-partite plan of the living floor, with a large cross-shaped central hall, which served as a distributing space between the four rooms. This plan was said to have evolved from the nomad tents, opening to a central common yard. This space had no analogue in Late Revival houses in Plovdiv, although the large hall might be seen as an organizing space of similar functions. Visually, the four eyvans divide the hayat, while in Plovdiv houses the hall is a unifying clear space. Rooms in Turkish houses had multi-functional character: bedding was taken away in the built-in cupboards, to stay away for the day, and be used for the night; while Bulgarian rooms had a clear division genetically inherited from earlier medieval examples: v'kashti (the room with the hearth) was the room to prepare food in and to be used for dining; soba was the room to be slept in. This division was kept in Late Revival period, for the rooms on the living floor.

Interior and decoration: In Turkish houses the 'U'-shaped seating divan arrangement was separated from the door-cum-cupboard area by means of banisters and a higher level. In Bulgarian houses, the 'L'-shaped minder arrangement in the walls with windows was kept, whereas the wall with the fireplace was similar to the Turkish one. The door was usually placed in the corner diagonally (sometimes entering directly from the side). Wall-painting as a technique is a similarity; wood-carved ceilings and built-in cupboard doors as well. A basic difference is the smaller height of the wall in Bulgaria. In

decoration of the exterior, the similarity is the white/painted walls, the overhangs (jetties) of the upper floor, the monumental silhouette due to the number of floors with steep terrain. Pediments mark a difference: bow pediments, convex-concave 3D forms, were very favourite in Plovdiv, Koprivshtiza etc., while Turkish houses have triangular pediments. The preference for 'star' motives and geometrical patterns on the ceiling is Turkish, whereas Bulgarian builders preferred 'sun'motives with plant ornaments, round patterns, flowers, undulating rays etc. Fireplaces usually had the same conical awning shape, although quite lower than the ones in the Turkish houses. Alafrangas are not seen in Turkish houses, although decorative flower vase motifs were depicted in wallpaintings. After comparison, we can conclude, that the style developed during the second half of 19th C was a continuation of local building tradition, with a number of references from other Oriental and West European sources, ecclectically grouped in the manner of late 19th C mix of styles.

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