

The Progress of Buildings Style and Materials from the Ottoman and British Occupations of Iraq

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Abstract

The period of ottoman occupation of Iraq was characterized by the same style of buildings and they used local materials as did their predecessors. At the beginning of ottoman occupation, governors were focusing on build mosques and religion schools (Tkaya). Houses were built in random styles depending on the experiences of the builders. For this reason, the houses became irregular and expanded randomly. This lead to the shrinkage of the areas of the roads where they became very narrow and used to referred to as “Drbuna”. At the end of the ottoman period the style of buildings changed and it was reflecting European renaissance influences such as the government campus known as “Qishla”. In 1917 the British army occupied Iraq. During this period the buildings were more inclined to the European style. New materials were used for the first time like cement and iron (Schliemann). The new materials and design destroyed the Iraqi heritage and cultural identity. It is believed that the new housing style did not take into consideration the Iraqi environment.

Keywords: ottoman era, cement material, mosque buildings, religion schools, iron (Schliemann).

1 Introduction

During the long history of Iraq, since prehistoric times the style of construction and

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developed methods of build was changing with time. Despite the changes all the methods used local natural materials for construction. This gave a special identity to the buildings. Locally available raw materials were mixed in different ways to get it stronger and stiffer which suited the Iraqi weather.

The roots of the basic features of the Iraqi civilization focused on ancient Mesopotamia civilization. Then during the Abbasid period it was clearly specified in its characteristic features. The same style of construction was maintained up to (1639- 1917) AD.

Ottoman rulers were concentrating their efforts to defend the borders of their empire. For this reason no real development in buildings took place during that period. Most of the efforts were concentrated on only reconstruction of old buildings and building some new mosques and religion schools. Some small towns were established on the trading roads. Near the end of Ottoman occupation they began to construct new buildings. The design of the buildings clearly reflects European renaissance influences. One of the main buildings of this style still exists and known as “Qishla”.

The British occupation to Iraq started in 1917. This occupation brought a new style of building and introduced the use of new building materials. These materials were not used before such as cement, iron (Schliemann), and concrete. As a consequence the techniques of building arches were completely changed [1]. These changes in style of building and materials are still in use in the present time.

This paper will demonstrate the most important characteristics of construction during the ottoman occupation period of Iraq and its developments. It will also describe the building style and newly introduced materials by the British occupation of Iraq which deviated from the traditional Iraqi architectural heritage.

2 Ottoman occupation periods (1639- 1917) A.D.

At the beginning of the Ottoman state, the style of building did not change. The houses maintained its traditional design which consisted of interior courtyard surrounded by the rooms and its services facilities. Ottomans governors were focusing on reconstructing mosques, shrines and building new mosques in different parts of Iraqi. Also they established many on the trade roads small towns around a central building known as “Khan” (Figure 1). This Khan represents the central market place. These towns such as Mahmoudia and Yousefayah were built randomly without pre engineering planning. The houses were not built according to a specific style. The style used was based on the financial ability of the owner

and the experiences of the builders [2].

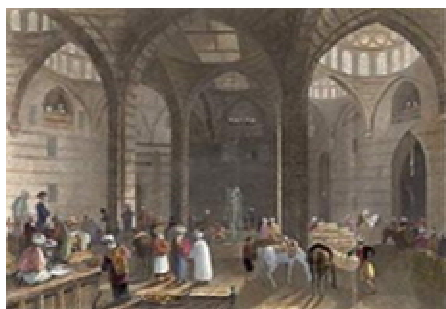


Figure 1: Khans on trade roads

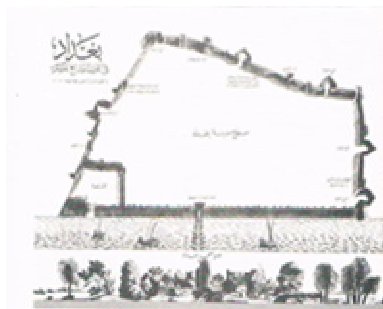


Figure 2: Baghdad Map on Nineteen century [3]

Baghdad city had remained without major changes. They kept its walls which were built with wage from the east side. The walls contained towers and surrounded by deep trench with four gates in the walls (Figure 2) [3]. Many parts of the city were inundated by the Tigris River floods and destroyed. Destroyed houses were reconstructed in accordance to the wishes of the owners and their financial capability. As a consequence there was no uniform or special design and symmetry. The walls look retorted and the roofs were irregular. Roads became narrower because of the expansion of houses. Wide roads became narrow alleys (Drbuna) (Figure 3).

The houses were either built as one or two floors. One floor built houses consists of middle open rectangular or square courtyard surrounded by Ewan's and rooms and all houses contain basement to be used during the hot climate. In the two floors houses (Figure 4), the first floor contains one or two corridors (Tarma), basement, food store, and the kitchen. The second floor consisted of connected bed rooms with each other's by tarma and have external openings for ventilation and lightening. Some of them have prominent windows called "shanashil" overlooking the road.

Materials used in buildings were wage, mud, gypsum and mud mixed with hay as binder. These materials are easily cracked and for this reason they used stones without any metrologic and mixing base considerations. These stones were called wastani, jabal, mhyar, and babbly.

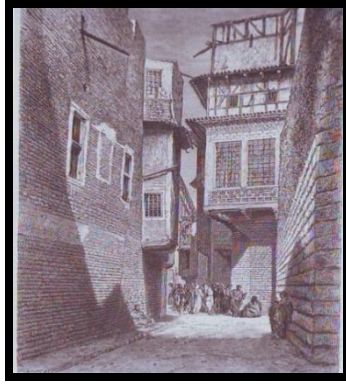


Figure 3: old Baghdad alleys [4]

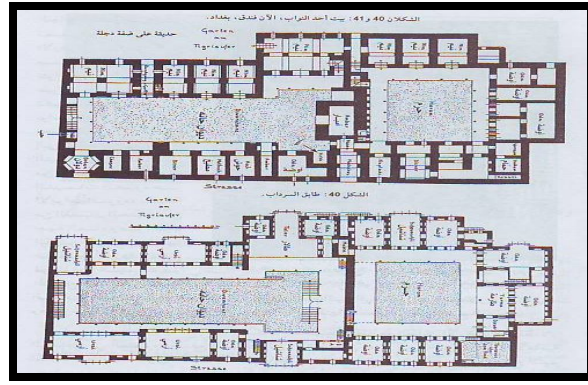


Figure 4: plan of two floor house with basement [5]

The foundations were (1.5-1.0) m in depth for good ground, but in bad ground their depth reached 3m. It was not required to build the width of foundation wider than walls in the houses. Foundations material used was broken wage and lime with ash as mortar. This type of mortar was used up to 1m over the ground [5; 6]. The style of houses had different designs and shapes all over Iraq. This was due to the fact that building was mainly dependent on the availability of raw material and the expertise of the builders. In the west part of Iraq the houses were very simple consisted of an entrance which were slightly above the ground called (Ataba) to prevent water and insects going inside the houses. The design of the house was composed of a central room surrounded by other rooms. The roof was dome shaped and wall thickness was about 50cm. All walls have unopened arches used to put things in it. House courtyard (Figure 5) was rectangular or square placed in one side of the house. Materials used for building were plaster, stones (because it is available in the area) and gypsum used in foundations because it resists moisture. Also they used wood for entrance ceiling. Figure 6 shows the material used in building units.

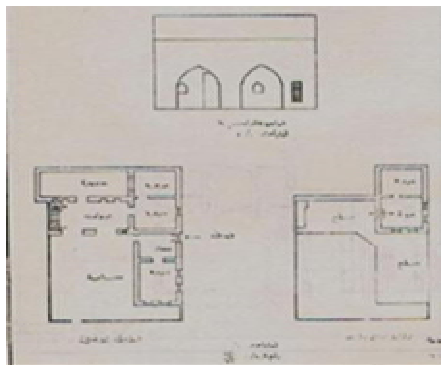


Figure 5: house plan in west of Iraq [7]

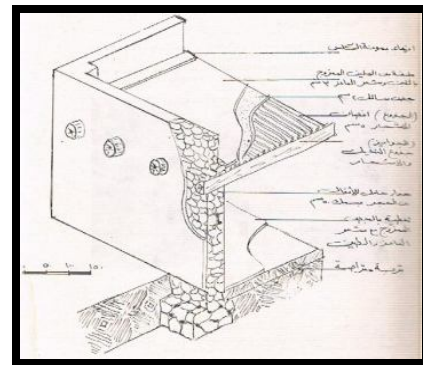


Figure 6: raw materials used in built units [7]

Ottoman governors were more concerned to build mosques like Alkhaski mosque, Ahmadiyya mosque (Medan), and Hayderkhanah mosque (Figure 7) as well as Quran teaching schools (Tkaya) such as Albanndnaiji (Mandalawi) tkaya, Khalidiya tkaya, and Sheikh Hassan Altayar etc. Hayderkhanah mosque was a distinctive building. It was built in square shape symmetric angles. It had three very big entrance doors, wide courtyard and winter chapel on its top large dome. On its side they built a very high minaret and summer chapel on the right of the winter chapel (Figure 8). A school was built and connected with the mosque. Materials used in its building were wage, gypsum, and marble. They also used columns and cylinders brought from neighboring countries, [8; 9 and 16].

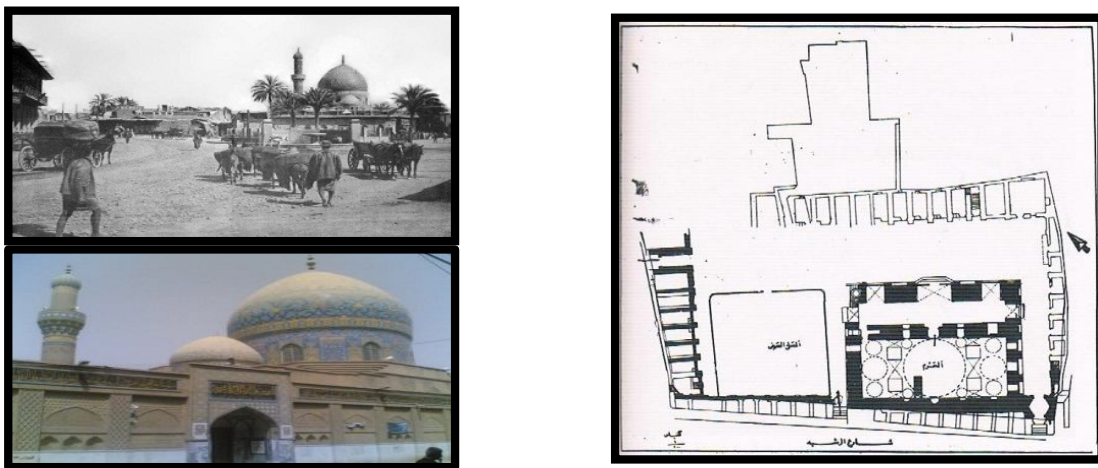


Figure 7: Hayderkanah Mosque [10] Figure 8: plan for Hayderkanah Mosque [8]

The most famous Tkaya was Albanndnaiji Mandalawi. It consists of a house of prayer, mosque, small school (Tkaya) for teaching science of mental and spirituality. Tkaya area was 1200 square meter, rectangular in shape (Figure 9). It had one main entrance in the middle of the eastern side. There were no decorations and windows on its front view. The entrance was connected to a narrow corridor ended with door of two parts (2*1.50) m. The building was one floor containing all units of structural, religious, residential, and services. In front of these units there were walkways and corridors. Open rectangular courtyard was in the middle of the building with a dimension of (22*21) m. There was a square garden in the middle of the courtyard (10*10) m and well for water tkaya need.

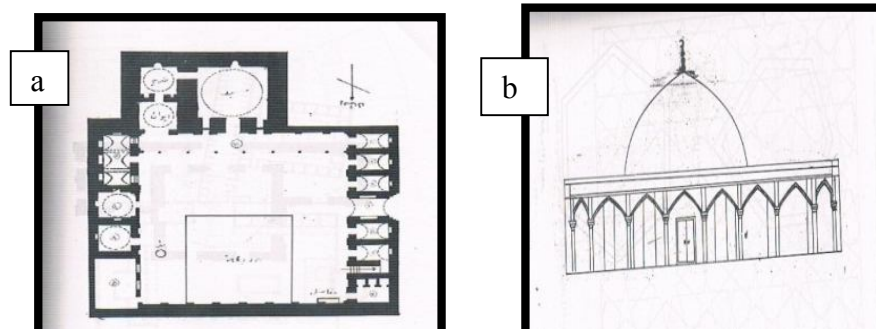


Figure 9: a-plan of Tkaya Albanndnaiji (Mandalawi), b- front view [11]

The structural units were distributed around the courtyard. Walls were built with thickness of 1m to keep moderate temperature inside the building. Wood was used to make columns with crowns holed roofs. Materials used in the building were wage and gypsum. Ground was furnished by small square wage (20*20*4) cm. Another famous Tkaya called “Khalidiya” (figure 10) was built and the building material was wage and gypsum. It was constructed on a rectangular land dimension (30*21.3) m. The Tkaya had similar design of Mandalawi Tkaya. It had one floor and one entrance and a middle courtyard (10*9.5) m which was the only source for air and light. Building was designed in such a way that courtyard separated the structural and religious units. Thickness of the walls was (2-3) m to bear the weight of the domes built over them. The prayer house was coated from the outside by tiles and blue glazed wage [11].

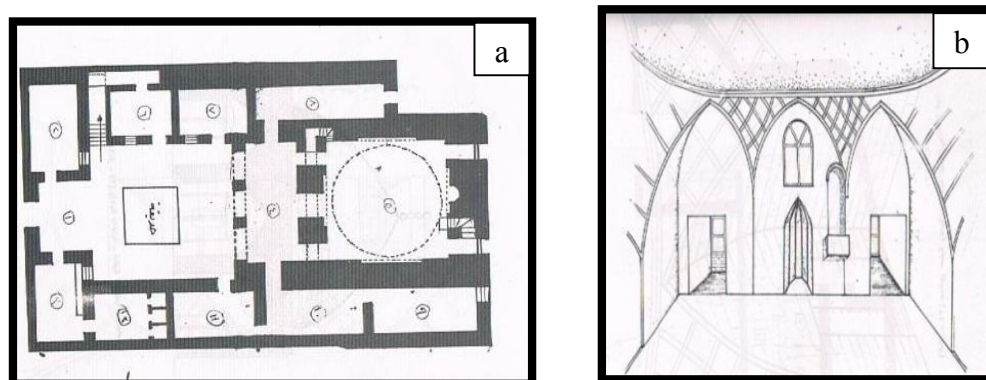


Figure 10: a- plan of Khalidiya Tkaya, b- front view [11]

At the end of the Ottoman period the style of buildings was changed. A new type started which was influenced by the European renaissance, mainly Italian style. The new style was shown in Qishla building which was built to be a military barracks. This building is considered as turning point in the history of Iraqi construction [12]. Qishla was built in (1851- 1853) AD, on the west bank of the Tigers river. The building consisted of two floors as L shaped (Figure 11). It had a square hollow tower in the middle of its courtyard, height 33m and its base dimension (9*9) m. The tower had four clocks in its upper part facing the four geographic directions. On the top of the tower ribbed dome was built. On its top a sign showing the geographic directions and winds was installed. Local materials like wage and gypsum were used in its construction and wage technology was used for the roofing (Figure 12), [13; 14].



Figure 11: Qishla building like Italian design [15]

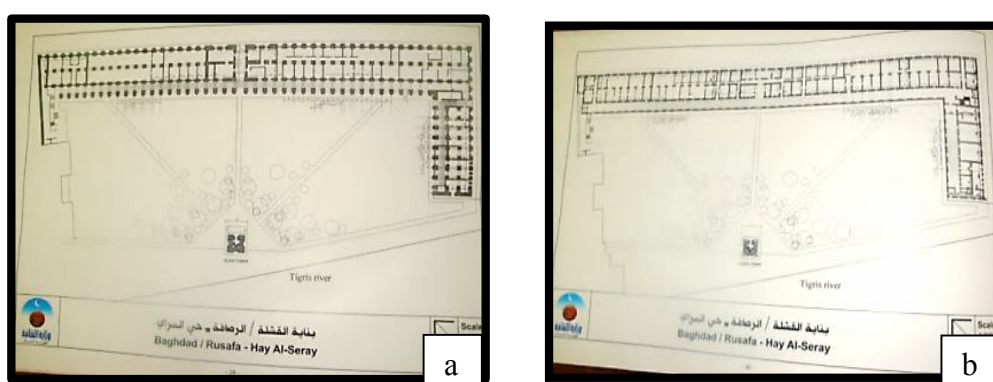


Figure 12: plan of Qishla building, a- ground floor, b- first floor [13]

3 British occupation period (1917-1958) AD:

Construction stopped in the first 12 years of the British occupation of Iraq. The construction first started with roads and bridges planning and building. Fixed bridges replaced the floating bridges between the two sides of Baghdad [17]. Planning and building was made by British engineers and architects. British engineers were implementing British designs. This period of Iraqi buildings history marked the start of a new ways and styles of design, building, and materials used (Figure 13). Materials such as cement and iron (Schliemann) were firstly used in Iraq at that period. In addition, local product like bricks used in a new technique referred to as stone technology on outer side of the walls [18]. The British were striving to apply the modern and organized urban planning. The towns were built similar to the British style. The British experience dealing with bricks helped them to construct the building in such a way to suit the hot weather.



Figure 13: Baghdad in the new planning [4; 19]

Residential areas had been developed and houses started to be built in straight lines, adjacent to the new streets. Walls were still built using raw brick and shanashil (which was made of several overlapping frames made from wrought wood with skylights and round windows) changed to open balconies. The Iraqi house (Figure 14) in this period had an English-Baghdadi style. Baghdad was divided into three parts. The first resembled the old center of the city which included the old houses with shanashil and narrow roads. The second part was the new neighborhood resembled the British houses style which was far away from each other. They were usually built along the Tigris bank from north and south. The third part was the rural clay houses or random homes proliferating in the suburbs of Baghdad. People from villages used to live there [4].



Figure 14: The Iraqi local Style Houses (English Baghdadi), [4]

4 Independent Iraq periods (1958- present):

During this period the style of building had changed in Iraq for different reasons. Modern building materials, equipment and technology were used. The Iraqis sought to take advantage of modern technology and materials in their work. The style of buildings, its suitability to the environment and culture were forgotten. The objective was to implement the modern western life elements style irrespective of its suitability to Mesopotamian environment [20]. The modern buildings were characterized by manifestations not related to the country's civilization or climatic conditions. The buildings became concrete masses full with foreign shapes without any character related to the authentic civilization heritage (Figure 15).



Figure 15: Modern Buildings in Baghdad [21; 22]

5 Conclusions

Ottoman period was characterized by its continuation of the old style of building. It was characterized by the presence of a courtyard in the middle of the building surrounded by all other facilities. The constructions were executed depending on the experiences of the builders not on the pre-engineering planning. Materials used in building were local such as wage, gypsum, and mud. The country was neglected because of the invasions and floods which destroyed most of the Iraqi towns. Some signs of development were noticed at the end of Ottoman period where some buildings showed European renaissance. These buildings were different in their design but it was built using the same local materials. During the British occupation period, the style of buildings was completely changed in design, building, and materials used. This was due to the fact that British engineers implemented the design style, materials and technology that they used in their home country to Iraq. They imported materials such as cement, iron (schlieman), and concrete. The buildings were note suitable for the Iraqi environment. Iraqi engineers and architects also adopted the western ideas without

pay any attention to the harsh climatic conditions that does not suit this style. Towns became full with concrete hybrid masses which make bad effects on the environment. Old engineers used the local materials because they were more suitable to Iraqi climatic conditions and friendly to the environment.

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