

The impact of population migrations in contemporary Amman city architecture

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Abstract

This research addresses the evolution stages of the city of Amman through the influence of the diverse population migrations in the city. The diverse styles were highlighted which accompanied the arrival of these immigrants from different places through the study of design trends and facades forms and architectural elements in terms of architectural patterns, architectural and interior distributions or construction techniques characterized by each stage. Amman had gone through periods of stability and turbulence throughout its long history, as Amman has embraced, the city of valleys and mountains, and springs of water, residential communities since the stone ages, but it has witnessed discontinuity spanned nearly four centuries. Hence, modern Amman has been formed by the advent of Circassians, and as a result of its falling under the rule of the Ottoman Empire, and with the establishment of the Hejaz Railway, which made Amman a station to attract immigrants from neighboring areas, all this gradually led to the formation of a modern image of Amman different from that prevailing before the end of the nineteenth century. Amman received many cultures and population assets, each one in turn led to leaving a trace in Amman architecture of its residential and public buildings alike, leading to the formation of a diverse Ammani's architectural identity. The study of it will determine whether Amman architecture is the result of the experiences and local cultures or the external factors have affected significantly in the formation of architectural fabric and the typical architecture.

Keywords: history of Amman architecture, traditional architecture, contemporary architecture, the city of Amman.

1. Introduction

It is acknowledged that architecture is a pot of art and culture, and accordingly, the arts in general are considered a universal language for dialogue and communication between different cultures, as through technical architectural styles we reach a level of interaction and harmony, impact and effectiveness between the arts and cultures. Architecture and Art are not just shapes and formations, but feelings and spirits embedded within those forms, and can't be understood or realized only if seen through their reality or cultural, psychological and symbolic background (Al-Otaibi, 2001).

The tracer of the architectural heritage in the city of Amman -research topic-finds in its buildings a diverse artistic style, which was a natural consequence of the diversity of its inhabitants' assets, which is a unique blend of the cultures of different people. Thus, this heritage has won a unique feature of the region.

1.1 The importance of research

architecture in general and the architecture of Amman in particular, such as migrations, global political conditions and economic circumstances; hence, Amman Architecture will be analyzed since the end of the nineteenth century until the present time. The fine variety in buildings and architectural genres of Amman architecture is noted. In general, when a visitor or Jordanian expatriate enters the city, he/she will find its spirit and traditional character have changed. It can be observed that some of it imitates literally the work of building abroad.

1.1.1 Research Problem

Amman has witnessed many historical civilizations and contemporary cultures, but the history of modern Amman began at the end of the nineteenth century. Since then, many of the social and economic changes happened, which in turn influenced the architectural configuration of Amman, especially its residential buildings. Also, the succession of migrations, whether from inside or outside Jordan, had an impact on prevailing

architectural styles. Studies that have addressed the topic of architecture in Amman are few somewhat, and depend in total on the abstract description of the buildings. Thus the conduct of this study is to illustrate the history of Amman architecture as this city and the surrounding area witnessed many of the political events which influenced directly and indirectly its activity and the architectural style, also to document, study and analyze some of the architectural works according to the architectural directions and ideas behind them.

1.1.2 Research Methodology

The methodology of the research will adopt documentary and descriptive study, through analyzing selected models of the city of Amman representing the period to be studied. The research will review first a study of the most important historical eras that passed by the city of Amman architecture, which in turn influenced the formation and crystallization of first Amman's houses in the period from the end of the nineteenth century until the establishment of the Kingdom, through the arrival of immigrants from different regions, from both inside and outside the Kingdom. Accordingly, the research will review a documentary and descriptive study of selected models of general houses and construction of the city of Amman in terms of the internal distribution, techniques and building materials, and some of the architectural details and vocabulary. Search methods rely mainly on a review of a number of books, references, publications and various periodicals and literature related to the subject of the study. Also, a number of tables, pictures and diagrams related to the research and its components will be attached, down to the conclusion and the final recommendations of the search.

2. History of Amman architecture (before 1878)

Amman is not only a political capital, but it's also the authenticity of the place and the historical rootedness, extending on more than one historic era, civilization and achievement (Radwan, 1996). There were many approaches of historical divisionalizations of the city of Amman, and researchers discussed this topic a lot, but they concluded that the political factors and circumstances, whether it affected the region or Jordan, had the largest influence in the formation of the modern history of the city.

The history of Amman starts from Ain Ghazal village that lies in the eastern part of Amman, where the oldest civilizations in the Stone Age were established, which dates are back to the year 7500 BC. As for the Amman area, it was constructed in the Bronze Age (1300-300 BC). This period is characterized by using the wheel to pottery. In the Iron Age (1200-332 BC), the region has seen an evolution in the use of iron in the arms' industry and household tools. The Citadel in Amman emerged as the Capital of Ammon. Remains of Ammon's palaces still exist in the Citadel, including wall fences and wells drilled in limestone. Also, four statues of Ammon's kings have been found in the castle dating back to the eighth century BC. (Gharaibah, 2006) In this period, Amman was characterized by the fortifications of stone towers that show military and commercial activity in the region, such as the twin towers of Al-Malfouf and Khalda which have been existing until now. Archaeology indicates that Amman was a link between the Far East and Mediterranean Sea extending to Athens, and then the Assyrians came around the middle of the eighth century BC. By the end of the seventh century BC, Babylon came to impose its control over the power of the Assyrian state, which was soon wiped out by the hands of the Persians who granted Jordan and Palestine self-governance in (540-332 BC), which provided a sort of relative tranquility and security. After that, the Greeks came to Amman in 332 BC until 63 AD, spreading its culture very quickly after the victories of Alexander the Great and leading to the establishment of many cities of Greek architectural models. (Saleh, 1980)



Figure (1), For nymphs and one of Circassians houses on the site.

The Romans took control of Amman, which was one of the Decapolis, and built the city's existing landmarks so far which are Roman Amphitheaters, the Nymphaeum and the Colonnade street that are all located in Amman

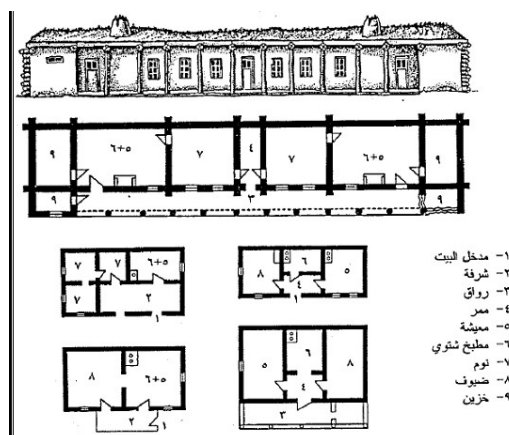
Nymphaeum. Yazid ibn Abi Sufyan (637 m) managed to open Amman and thus ending Ghassanids state that was controlling Balqa area, which Amman was part of it.

In the Umayyad period, Umayyads built a great palace on the Citadel and considered Amman as an administrative center. Then, when the authorities turned out to the Abbasid Dynasty, they once again who considered it administrative center as well. In the Fatimid Caliphate, Amman turned to a Forces Assembly Center. In their late governance during the late tenth century, external pressures began at the arrival of the Crusades. In 1184, Saladin had passed by Amman on his way to Karak and hence became part of the Ayyubid Dynasty. In the Mamluks period (1258 - 1516) the city had witnessed stability and flourished in the seasons of Hajj. Grand Vizier Kemal Pasha suggested to the Sublime Porte in 1878 to use Amman state In the Ottoman period (1832_1913), however the advantages that could be taken into consideration for Ottoman's people in the history of Amman is their establishing the Hejaz Railway, which was passing in Amman. (Fathy, 1993)

3. Amman Contemporary Architecture

3.1 Circassians (1878_1900)

the cultural continuity of Amman city witnessed a recession lasted sometimes for several centuries, as Amman was deserted and nomadic Bedouin come to request for water, until Circassians came up in the year 1878 (Malkawi, 2001).



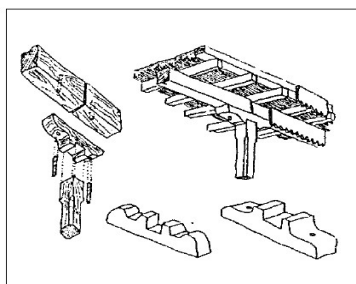
Figure(2), Different styles of homes taken by the Circassians in the Caucasus homeland

About nine years later, they were followed by the Kurds, as first Kurdish family lived in Amman in the Year 1887, all this had led to a whole series of changes which in turn led to shifts in this quiet little city. The city soon witnessed an unfamiliar Architectural breakthrough since the Roman era nearly two thousand years ago. That renaissance was the beginning of emerging Amman modern city which strike deep roots in ancient history (Kurdish, 1999). After the arrival of the first Circassian groups to Amman, some families inhabited the existing historical buildings in addition to the Roman Theater Corridors, and in some aspects of the Nymphaeum as well as dilapidated buildings and caves located in east of the Citadel's hill. The arrival of Circassians continued after 1878 in successive waves and settled in Amman Nymphaeum as agricultural societies, and they dwelt two main regions along the valley, the Chabsog and Al-Muhajireen (Rifai, 1996). After new immigrants having resided for a period of time in the Roman Amphitheater Corridors, they started establishing houses near Amman Nymphaeum, which used stones and brick molds of dried mud to build it. However, the roofs were covered with felled trees, branches and reeds which grow in abundance along Amman Nymphaeum, and then covered with a layer of mud mixed with thatched each year (Swart, 1995). Houses were small and simple built with the rectangle pattern and Portico patterns. These houses were characterized by specialization of functions, where Circassians transferred different patterns from their homeland Caucasus to their houses, which they established in Amman.



Figure (3), Model of Circassian house. A row of rooms adjacent longitudinally in front of it open Balcony slightly elevated approximately 50-70 cm above the balcony is an extension of the roof of the rooms, supported by a number of strong wood sticks.

The houses of the Circassian were a rectangular projection consisting of one floor, which is on a high degree of utilitarian; both in terms of design or general distribution, and often these houses were surrounded by a stone wall that shaped an external courtyard used for animals or the domestic agriculture purposes. Some of these houses were built of mud bricks and the others of pieces of rough natural stones with wooden roofs covered with a thick layer of mud mixed with straw. These houses were built independently and sparsely on the southern slopes of the Citadel, and along the valley. Internal distribution and function of the Circassians' houses depended mainly on specialized functions.



Figure(4), Roofing system in the Circassians houses adopted the wooden beams, in two directions perpendicular, and then covered with a layer of reeds, and finally mixed with thatched mud.

3.2 immigrants from neighboring villages 1900-1921

A lot of Jordanian families came to Amman from neighboring areas or remote areas for the purposes of work, commerce and agriculture, as Amman received many expatriates from Jordanian cities and villages who settled there. From Salt, many families contributed to the development of agriculture in the region, and they in turn brought many farmers for the cultivation of vast lands that they owned. Also, many families came from Sahab, Ma'n, Karak and Fuhais (Kurdish, 1999).

Amman had been influenced by many factors that affected the formation of buildings architecture, varied between natural, social, political and economic factors, apart from the fact that the city's population is a mixture of various origins, and thus Amman witnessed many changes that played a role in forming the characteristics of Amman Architecture of local buildings in the period from the end of the nineteenth century until the establishment of the Kingdom.

At the end of the nineteenth century, Circassians owned most of the lands in the center of the city and the surrounding mountains. The arrival of the Hejaz Railway to Amman in 1903 and the start of functioning of trains between it and Damascus attracted immigrants from neighboring villages such as: Salt, Madaba, Karak and some neighboring states, leading to the establishment of a city center that pioneered in trade, and thus the features of Amman society emerged and crystallized as we see it now. (Rifai, 1996)

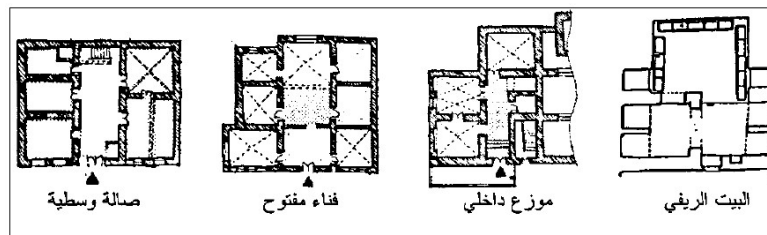
The presence of a railway station near Amman influenced the increase in commercial traffic and the

constructions around the Amman Nymphaeum as well as the increasing number of people who come to work.

In the year 1921 Prince Abdullah Bin Al-Hussein Bin Ali had arrived to Amman and made it the Capital of emerging emirate (Malkawi ,2001) all this led to the growth of the city center, also communities flourishing on high lands which are adjacent to the city center with clear building patterns. Natural Stone became the most used building material, and Refai described this phase; the phase of climbing mountains, as the new architectural pattern has been characterized by Pedestrian system where long narrow stairs were heading towards the mountains that formed the general stairs. Most of these buildings were, despite being for upper class, simple and modest in size which allowed it to respond sensitively and successfully to the topography of Amman's site which has many slopes (Rifai and Kanaan, 1987).

3.2.1 Al Salt traditional houses

The geographic location of Al Salt city has helped in the settlement of agricultural communities and establishing urban centers since old times, furthermore, the availability of water springs in the city as well as fertile lands in addition to its location led to the development of the city and an increase in population. (Royal Scientific Society, 1990).



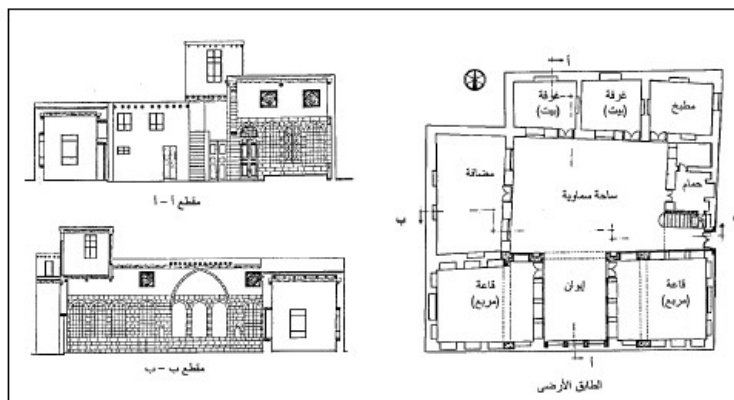
Figure(5), Home styles of traditional houses Salt,

The types of houses that appeared in Al Salt in general were affected directly by climate factors, building materials and different social elements, all of which influenced the interior arrangement of the house and its overall design. According to a study conducted by the Royal Society in Al Salt city, traditional houses of the city can be categorized based on their interior arrangement to the following main types:

- Country house: the same type that dominated the local architecture of the region (Syria, Lebanon and Palestine), which adopted the principal of terraced archways.
- House with interior hallway: this type contained an interior corridor that forms a distributor that lead to the remaining spaces, this distributor can take many positions, it could be in the center of the house or at the side and it can become the distributor room.
- Open patio houses: many patterns were formed based on this particular type, and it differed in terms of the patio's location related to the interior arrangement of spaces, at times it is centric and others on the sides. Some residential models contained more than one interior patio.
- Houses with 3 fountains: this type represents the central link that also spread in Lebanon and Syria.

3.3 Syrians 1925-1926

Three different families coming from Damascus and other Syrian cities arrived to Amman in the late nineteenth century and early twentieth century to work in trade and handicrafts, and among them were important traders and proprietors. With time, some families settled in Amman including Altabba'a family, Abu Qura, Al Kilani, Al Saruji, Al Saudi and other families, and due the Syrian Revolution against French Colonialism 1925/1926 many rebels form Jabal Al Druze together with their families seek refuge in Amman, and settled in a neighborhood that is named after them, Hay Al Druze, located between Hay Almasarua and Haouz Jabal Amman. Soon after, some families left to other areas in Amman including Hay Um Tabna in Jabal Alashrafyeh formerly known as Hay Aldruze. (Al Kurdi, 1999).



Figure(6), The traditional home of the Syrian It is clear from the shape of the most important elements of a heavenly scene and Iwan.

3.3.1 Syrian Traditional Houses

The Syrian house is a house with a closed internal space, comprised of several rooms distributed over one side or more, or on the four sides of the interior courtyard, which creates uniformity and oneness to the Syrian house. There are some variations between cities regarding the used building materials, in Damascus the houses were built completely or partially from mud and wood, whereas in Aleppo stones were used. (Tuma, 1993). Sinjab classified the houses that spread in different areas in Syria into three types:

1. Liwan Houses.
2. Central-Hall houses.
3. A combination of the previous types.

And that agrees with Daghan (1999) who divided the architectural stages of Syrian architecture, particularly Damascus and Aleppo into three primary stages:

- Traditional housing

This stage occurred during the period extending from the mid nineteenth century where the open courtyard was adopted in designing the house, it is usually comprised of an Liwan, halls and services utilities, in addition to stone or wooden stairs that lead to the upper floor where the lofts are.

- Transitional housing

This stage extends from the mid nineteenth century until the late Ottoman era, where developed districts were planned in order to accommodate the increasing demand due to the growth of the city. The plan was similar to the plan of the traditional housing (depending on open courtyard, iwan,...). Traditional materials were used including bricks, mud and wood. At the end of this stage a housing that does not depend on the open courtyard was created, the first floor served as a reception and living area as well as containing facilities, the second floor contains the rooms. Local materials were used in the construction. At the end of this stage, the housings developed, where the plan of the traditional housing that depended on the interior courtyard was modified into central space system (Sofa), which is due to the unmistakable effect of the new social life witnessed in the Ottoman Turkish regions, which in turn was influenced by the western way of life. As for the used architectural elements, the number of the openings overlooking the street increased, while keeping the ones overlooking the open courtyard, that in addition to the balconies and bay windows overlooking the street.

- Modern housing

In this stage the housing buildings were constructed using modern materials (concrete, steel,...) and according to the French building system. The models of these buildings varied in its planning as well as its architectural and structural elements.

3.4 *Palestinians*

The period of local governments ended with the arrival of Prince Abdullah I Bin Al Hussein to Amman. During the time of founding the Emirate, Amman was mostly a big village occupied by several thousands of people, who worked in agriculture, and traded among themselves with some corps in exchange for simple manufactured products such as fabrics, tea and sugar that was imported from Damascus and Jerusalem. And by selecting Amman to be the capitol of the Emirate, it became an administrative, political and economic center that attracted newcomers from Syria and Palestine, which contributed in immensely increasing the population compared to the time of founding the Emirate.

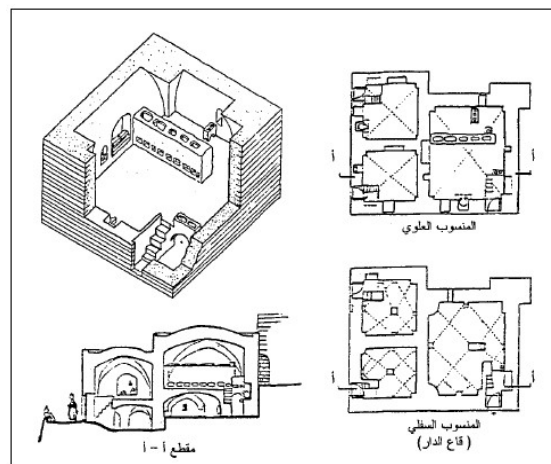
Political factors influenced the local community greatly, which in turn affected the formulation of the characteristics of architectural styles. It must also be taken into account how the migrations that occurred following the Palestinian exoduses in 1948 and 1967 in addition to the events of 1973-1976 had a great effect, these kinds of sudden changes that took place in Amman led to an unanticipated population growth and massive pressure at all levels; social, administrative or economic.

3.4.1 *Palestine Traditional Houses*

Palestine and Jordan are linked by a sturdy geographic connection, the people of both countries share customs and traditions, and that is the main reason as to why it was necessary to study the most important architectural types that spread in Palestine as it may have impacted the architecture of Amman, especially after the exoduses and the displacement of a great number of Palestinian families between 1948-1968. It is safe to say that the Palestinian traditional architecture contains several architectural types that can be summarized with the following:

Dalman (1964) classified the types of traditional houses in Palestine as the following:

1. Houses with no interior pillars.
2. Houses with a hallway.
3. The house topped by a cellar, which represented the dominant urban style in the Palestinian cities.



Figure(7), Traditional house in Palestine.

This concurs with Fuchs(1996) who categorized the architecture of traditional houses in Palestine into three main types:

- Country house with a single space: which is a single space or room, where all activities including sleeping, cooking or storing take place, this space is usually a rectangle or a square. This type spreads in Syria, Jordan, Palestine and Lebanon with some simple differences regarding the building techniques and interior arrangement, in addition to a few architectural details. The roofing in this type of houses depends on wooden roofs made from tree trunks, which are placed on the bearing walls that can be supported from the inside using arches. The majority of these houses were comprised of one floor which is accessed through a low door, and the openings were small and few.
- City house: the greater part of the urban cultural character in Jerusalem, Nablus, Hebron and Ramallah adopted a principle that is similar to one spread in the village in terms of design, which is the single residential

space and the open courtyard but with a more integrated manner. The courtyard was reached through a corridor, this courtyard is centered with a pool surrounded by trees, as for the rooms surrounding the yard, they were roofed using a structural system that adopted domes, which in turn are placed on stone bearing walls. What distinguishes the skyline of the Palestinian cities is the domes that cover the houses. These houses contain few architectural openings that usually overlook the interior courtyard, these openings provide limited ventilation and lighting. The ground floors have been used as stores or shops, and external stairs were used to reach the upper floor that is used mainly for sleeping and other activities. The rooftop was used as a yard and a living space, in which the parapet is elevated to ensure the privacy of the house residents.

4. Standard application of Amman architecture and the effect of population migration on it

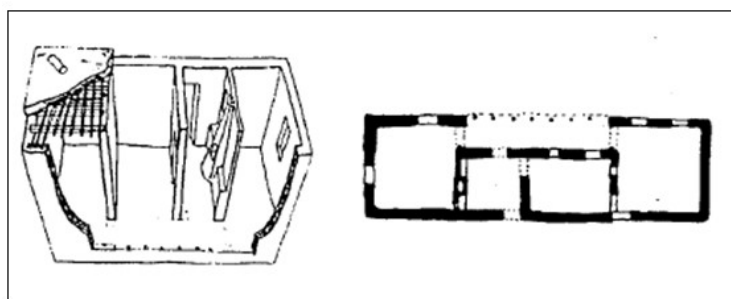
The book “This is Amman” published by Amman Municipality in 1950 mentioned a description of the buildings of old Amman: “the housings in old Amman were small units not exceeding two rooms. Its walls are made from raw materials such as mud, and roofed using wood and reeds, these units were used for the majority of living needs. And with the cultural development these buildings began to gradually vanish and in their stead modern buildings were constructed using concrete and bricks. The houses of Amman varied with its architectural types, and some of those types resemble other types in the region. The following describe some of these models.

4.1 The house of Amr Ayoub Al Shishani 1919

Most of the houses that were built by Circassians and Chechen in Amman vanished, however, Khammash (1986) mentions some houses that still remaining in various villages including Sweileh, Wadi Seer and Naour. The House of Amr Ayoub Al Shishani in Sweileh was built in 1919, there exists a distinct peculiarity in functions, different rooms are separated by relatively thick walls, and are linked by a corridor. The walls were built using dry mud molds or from pieces of natural rough rocks, where mud was used to cement the walls. White limestone was used to paint the walls from the inside and the outside to keep them clean. As for the roofing, Circassians were known for their skills and deep-rooted heritage in woodworks, which was clearly evident in building their houses, where wood was used vastly.

4.2 Al Arif House 1923

The house is comprised of two floors; a main floor with a central hall, and a second floor that does not have the same area covered by the main floor, this floor was used for services purpose in addition to storage. The interior arrangement of the main floor elected the triangular distribution, and the hall occupies the entire extent of the house. This building’s interfaces are simple and distinct and contains an open porch. The architectural details are characterized by using stone in building the arches in the shape of circular archs. It is to be noted that the houses with central halls appeared in Lebanon, and is considered the most widespread and the most expressive of the Lebanese architectural identity. In Al Arif house it is observed that based on the location of the site on a hill, accessing the house is through a single entrance that leads directly to the central hall.

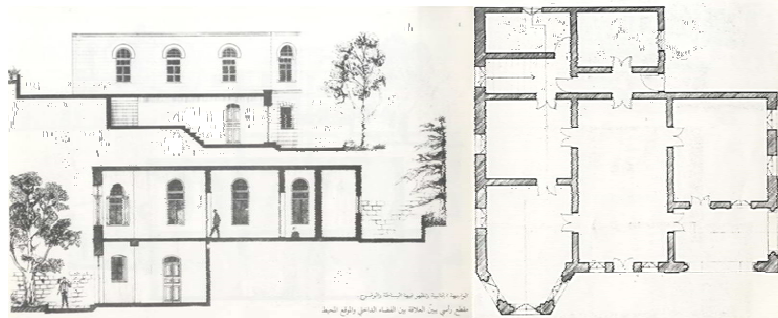


Figure(8), Beit Ummar Ayub Chechen in Sweileh, 1919, where there is a clear specialization in functions, and different rooms separated by a relatively thick walls, and communicate with each other by a gallery.

4.3 Al Murtada House 1925

The house was built in 1925 (Al Rifai & Kanaan, 1987) in the style of a villa on a separate land, the house is one storey, the interior arrangement follows the triangular distribution, the central hall occupies the depth of the house, there is a corridor that extends along the front interface, and the hall can be accessed through this corridor. The current condition of the house is different; the corridor was closed by installing walls that created several additional rooms. As for the architectural interfaces, the symmetric triangular distribution is clearly reflected on

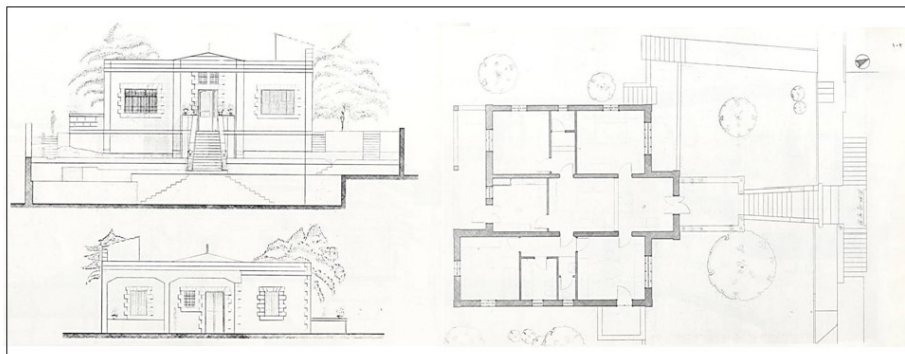
the front interface, however, that is not achieved in the back interface, the back entrance that leads to the central hall was positioned to the side with an adjacent window on the other side.



Figure(9), Ground floor plan, the house of Arif and vertical sections

4.4 Al Sabbagh house 1935

Al Sabbagh house is located in Jabal Amman, across from Wild Jordan, built by the architect Sido Al Kurdi, its original owner was Marwan Al Sabbagh. This house is considered one of the houses of old Amman that is known for its stone structure and triangular distribution. It is located on a site that is downhill, which give the structure the feature of different elevations of the building's interfaces. The house's plan is characterized by its symmetry around the middle axis, and focusing on the entrance with a protruding block accessed by going up the stairs that are featured by its obtuse angle to welcome the visitor. The main entrance is linked directly to a central hall with rooms overlooking it. Generally, by the thirties of the twentieth century the western influence and the semblance of modernity started to appear on the residential architecture in Amman, houses were built using stone but in a method that differ from the traditional method.



Figure(10), plans shows the importance of the central hall which opens out all the different rooms

Conclusion

- Architecture in Amman are indeed regional dimensions, was the result of touches Circassians, and a Palestinian, Syria, as are its society from a mixture of various backgrounds population origins , Man when he moved from one place to another, he transferred his culture , money and experience technological and artistic, and this is what happened in the city of Amman, like mosaic of community.

Amman architecture of country-style turned out to be urban-style over the years, as clear patterns began to emerge, such as the pattern of all the open courtyard style moderation hall recent pattern is that the majority of the houses Amman shape at this stage, and the underlying cause of the spread of this style in that time is that he enjoys many advantages and social benefits.

- Amman have witnessed many changes and factors, which directly influenced the composition of architectural character, it was an integral part of the Levant region, it is natural that contain similar patterns and its convergence with the cities nearby, and different techniques and construction materials
- migrations led to increased urban growth as a result of immigration and asylum the millions from neighboring countries that have seen a variety of disorders and this contributed to the formation of Amman architecture.
- Amman is somewhat different from the neighborhood, as it suffered sudden mutations and successive events, witnessed represented the cultural stagnation, and the arrival of the Hejaz Railway ..., these acceleration events led to acceleration in population.

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