



**ANALYSIS OF IRAQI HOUSES AND PALACES IN THREE DIFFERENT
PERIODS AND ASPECTS TO BE TRANSFERRED TO MODERN BUILT
ENVIRONMENT**

FIRAS GHADHBAN AL-TAMEEMI

JUNE 2016

**ANALYSIS OF IRAQI HOUSES AND PALACES IN THREE DIFFERENT
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ENVIRONMENT**

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THE GRADUATE SCHOOL OF NATURAL AND APPLIED
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**BY
FIRAS GHADHBAN AL-TAMEEMI**

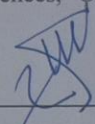
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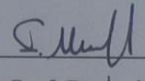
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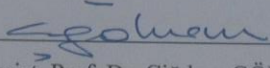
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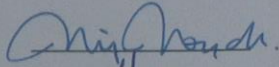


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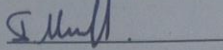
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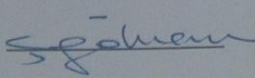
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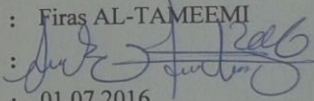
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ABSTRACT

ANALYSIS OF IRAQI HOUSES AND PALACES IN THREE DIFFERENT PERIODS AND ASPECTS TO BE TRANSFERRED TO MODERN BUILT ENVIRONMENT

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Iraq is a country where two great civilizations have been established: Mesopotamia, which is considered to be the cradle of civilizations, and the Islamic Empire, which has been established in Abbassid period. Iraq ruled the world two times through these two greatest civilizations. It is unfortunate, sad and inappropriate for this land to produce buildings with identity that does not belong or connect to these two civilizations. This is the main incentive that leads the research to study and analyze the root and identity of hallmarks, features, uniqueness, and characteristics of Iraqi houses. Houses are a mirror of our lifestyle, a reflection of our culture, and a

representative of all our habits. In this way, houses are related to our roots. The relationship between houses and lifestyle is so old that, and through the ages, houses represent and reflect lifestyle factors such as, religion, manners, privacy, social structure, family structure, and environment. When houses represent lifestyle, there will be stronger relationship between houses and their spatial and temporal aspects. As a result, any building that does not carry the spirit of place and time will be a hybrid, and eventually, not related to one of those civilizations. The research focused on how lifestyle influences the design of house, in Iraq, through three different periods: Mesopotamia period, Abbassid period, and the period between the ends of Ottoman occupation until the establishment of Iraqi Kingdom. The research depends on studying and analyzing the history of lifestyle and houses' structure. And then comparing these three periods to learn lessons from Iraqi architecture in terms of traditional and vernacular identity, features, traits, and characteristics in order to evaluate modern houses.

The study concludes that traditional Iraqi houses are sustainable and suitable for modern design with some changes. Traditional materials are appropriate for modern environment. Several features can be applicable to modern houses. The study proved that religion had minor or no effects on the design of houses. For example, during these three periods, same several architecture elements have been used and these elements are climate-friendly. Pure Iraqi style must be followed to keep the identity of Iraqi houses. In modern houses, designers must diagnose and eliminate hybrid elements, and instead they should use those that can articulate temporal and spatial spirit of our civilization.

Keywords: Traditional Houses, Identity, Lifestyle, Houses, Palaces

ÖZ

**İRAK EVLERİNİN VE SARAYLARININ ÜÇ FARKLI DÖNEMDE
İÇERİSİNDEKİ ANALİZİ VE MODERN BİNA ORTAMLARINA
AKTARILACAK KİMLİK YÖNLERİ**

AL-TAMEEMI, Firas, Ghadhban

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Irak, topraklarında iki büyük medeniyetin kurulmuş olduğu bir ülkedir. Birinci medeniyet, medeniyetlerin beşiği Mezopotamya ve ikincisi ise Abbasi Dönemindeki İslam İmparatorluğudur. Irak iki kez bu büyük medeniyetlerle dünyaya hükmetmiştir. Ülke için üzücü ve talihsiz olan şey ise, inşa edilen binaların kimliklerinin bu iki

büyük medeniyete ait olmaması ve onlarla herhangi bir bağlantısının bulunmamasıdır. Bu durum, bu çalışmanın yapılmasına, Irak evlerinin kimliklerine ve köklerine ait özelliklerini, eşsizliklerini ve karakteristiklerini incelenmesine teşvik eden ana sebep olmuştur. Evler yaşam tarzının aynası ve kültürümüzün yansımasıdır, ev tüm alışkanlıklarımızın temsilcisidir, bundan dolayı evler aslında köklerimizdir. Evlerle yaşam tarzı arasındaki ilişki eskiye uzanmaktadır, geçmişten bu yana tüm evler din, töre, mahremiyet, özel hayat, aile yapısı ve çevre gibi yaşam tarzlarını gösterir ve yansıtırlar. Evler yaşam tarzını gösterdiklerinde, bir taraftan evler kendi aralarında diğer taraftan mekan ve zaman arasında daha fazla ilişkiye sahip olmaktadır. Sonuç olarak, mekanın ve zamanın ruhunu taşımayan herhangi bir bina melez olabilir ve bu medeniyeti temsil etmez. Araştırma, erken Mezopotamya dönemi ve erken İslam İmparatorluğu Abbasi Dönemi ve Irak Cumhuriyeti'nin kurulması ile Osmanlı işgalinin sonu arasındaki dönem olmak üzere üç dönemde, yaşam tarzının Irak'taki evlerin tasarımında nasıl bir etkiye sahip olduğu üzerinedir. Araştırma, yaşam tarzı ve ev inşaatları tarihinin çalışmasına, incelenmesine ve gelenek, lehçe, kimlik, özellik ve karakteristik açıdan Irak mimarisinden ders alarak modern evlere uygulanmak üzere bu üç dönemi karşılaştırmaya dayalıdır.

Çalışma, geleneksel Irak evlerinin sürdürülebilir olduğunu ve bazı değişikliklerle modern tasarımlara uygun olacağı sonucuna varmaktadır. Geleneksel malzemeler modern ortamlar için uygundur. Birçok özellik modern evlere de uygulanabilir. Çalışma, dinin mimari üzerinde çok küçük bir etkisinin olduğunu veya hiçbir etkisinin olmadığını kanıtlamaktadır. Örneğin, bu üç dönemde de, birkaç aynı mimari unsur kullanılmıştır ve bu unsurlar iklime uygundur. Sade Irak tarzı, Irak evlerinin kimliğini korumayı sürdürmelidir. Tasarımcılar, melez karışımları takip etmeli ve onları kullanmaktan kaçınmalıdır, onun yerine, zamansal ve mekânsal ruha hitap eden modern evlerin de kullanımlarını düşünmelidirler.

Anahtar Kelimeler: Geleneksel evler, Kimlik, Yaşam tarz, Evler, Saraylar



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To all of my professors taught me..... Esteemed tribute to them for life

To all Iraqi Martyrs.....

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LIST OF ABBREVIATIONS

A C P	Aluminum Composite Panels
PUH	Peace Upon Him
TOD	Transit-Oriented Development
TND	Traditional Neighborhood Development



CHAPTER 1

INTRODUCTION

1.1 Background

Lifestyle is a term that expresses the mode of living adopted by individuals, groups, or a nation. Lifestyle depends on characteristics of a civilization, and culture in a specific time and place. Moreover, it is formed by complex and interlaced economic, religious, cultural, environmental, and political dimensions, and other life joints, as well. Therefore, lifestyle represents our roots and identity. Lifestyle is a form of our features in this massive world, and it is our unique habits and behaviors. In general, lifestyle is embodying life practices -whether individual or collective- of the population that consists of expressions of past and forming the future characteristics and features.

The policy of globalization that aims to disburse a lot of modern ideas whether they are true or wrong, aims to eliminate originality in countries. With this new social phenomenon (globalization), in the countries that have deep-rooted civilizations, their people's lifestyle has been influenced by demography and technology. The recent research refers to the notion that lifestyle is not limited to synchronic (which means space or "way of life") but also it includes diachronic (which means the time or "good life"). So, globalization motivates societies to think about new good/modern lifestyle while inviting them to abandon their social and physical identity. One day, the cultures of the world will be all similar, and there will be no difference between different societies, even under different climate and environment. The way we sleep, eat and drink, and our clothes, houses, streets will be the same. We will come to the time that we can't sense or taste the criteria of beauty, or the value of place's identity, instead, the space will be one, as if the time stopped.

Lifestyle always depends on criteria/standards of life. The criterion of life is a massive subject; it includes each detail in our lives, not in general but also in depth. For example, the way of making bread is different from one place to another, and the shape of bread is different, as well. One important thing we can observe is that, sometimes, the lifestyle in one civilization and culture is variant according to class, religion, gender, education, age, etc. For example, the difference is clear in dealing with life options such as housing, professions, etc.

The relationship between the house and lifestyle is that the form, material, environment solutions, arrangement of spaces, and other details of house must be transformed according to the location and lifestyle of the user. Lifestyle is the identity of individuals, or a group of population in a specific area and in a specific time.

Traditional and vernacular houses have a great and deep relationship with the location, environment, and time, in complex and interlaced way. Traditional houses have the indigenous spirit of location and have deep roots. For example, if we move these entities from their place, their function and form could be distorted. Traditional houses carry deep thinking and thoughts that our ancestors translated into the buildings, especially houses in which each detail carries ideas and thoughts translated in a genius way. There are many theories, methods, and knowledge about climate, physical environment, and social environment that explain how they were built in an integral system. This integration has been done in a simple way to make the house functional and it depended on priori once and experience once more. In addition, it was conducted in a way not to affect environment that they live in. Houses express the society's habits, behaviors, manners, function, religion, culture, privacy, communication, neighborhood, climate, habits of eating, sleeping, wearing, and these all are related to our lives. That is our traditional/vernacular houses. Whether it occurs spontaneously or intended, all details in traditional houses come to represent human needs and function in top level of importance.

Culture is the basis of the lifestyle, and lifestyle is a form of culture in which people can think and have thoughts, or the way they behave and understand and then they translate it in their social life by forming their lifestyle. Anthropologists divided culture in their theories into two parts: the first one is the traditional, and the second one is the modern [127]. So, we have a traditional lifestyle and culture, and we have a modern lifestyle and culture. In an interesting article, (Traditional Culture and Modern Culture: Man's Fall from Grace) Knick makes a comparison between traditional lifestyle and modern lifestyle. He mentioned that the pace of life and fast change of modern culture led to fast change of lifestyle. That, in turn, made most people separated and isolated with no relationships, even within the family. Also, no respect manner as in traditional lifestyle caused a gap in social communication. Actually, isolationism is an important policy that disunited the social unity and relationships that affect the designer and people to look for isolated houses; it is one of the results of modern culture and globalization.

Iraq is an important country because of its location and its wealth. The country is divided into three administrative regions, north, middle, and south. The middle and south area are appropriate for agriculture because of its plain land. The north area has mountains and there are some plain areas, as well. From the environmental aspect, the agriculture in north depends on rain, while in south; it depends on irrigation by canals. The weather is variant across the country. In south, summer is very hot and temperature goes higher than 60 Celcius degrees. In the middle, it's up to 50-55 Celcius degrees on average, while in north it's up to 40 degrees. Because of the global warming phenomenon, almost all the land in the middle and south of Iraq turned to desert. The weather changes year by year and the temperature is getting higher. Politically, Iraq suffers from wars, the government is usually formed by new parties. For a long time, Iraq has suffered from occupations and colonialism, each occupation steals and destroys everything. The laws always change as governments change. From religious perspective, Islam is the main religion, and there are several religions as well, such as Christianity, Judaism, Yezidi, Baha'i Faith, and Shabak religion. Economically, Iraq now is a non-industrial country with little agriculture, and economy just depends on exporting petrol. Historically, in Iraq the first and great civilization had been established which is called Mesopotamia. Also, in south there

had been the Sumer civilization, while, in the middle, there had been Babylon and Ishnuna civilization. In north, there had been Assyrian and Chaldean civilizations. After several wars and occupations and in early Islamic period, a great empire of Islam has been established in the middle of Iraq – around Baghdad. Again several wars and occupations had occurred until Iraqi kingdom was founded.

The research selects three different periods to discuss the influence of lifestyle on designing houses. First period is the Mesopotamia period; second period is in early Islamic time (Abbassid Period), and the third is the later period of Ottoman occupation until the beginning of Iraqi kingdom.

Mesopotamia is the first civilization that formed its pure culture and pure lifestyle as first civilized city. Mesopotamia is the great civilization as writing has been invented, which is considered to be the first tool of culture. They translated their thoughts, religion, and understanding of the environment in their buildings in a simple and developed way. They created their pure lifestyle that is based on their understanding of things that have been established around them. In this period, Mesopotamia led the world by their great civilization. Because of the invention of writing, they developed in science such as astronomy, mathematics, chemistry, agriculture, architect, and medicine. In addition to that, they invented other crafts and primitive industrial tools. The religion was idolater and they were worshipping the idols. The king used to be selected by god and then became the god. At that time, social structure was based on classes. Agriculture and trade were the main sources of income. Houses and palaces represent the need rather than the wishes, and organic urban planning was the trait of a city.

City of peace (Madenat Alsalam), Baghdad (which is referred as a circular city) is the capital of Islamic empire under Abbassid rule. It had a modern urban planning, circular and radial what gave it modern trait. Caliph is the Commander of the Faithful, rule a lot of areas, and he became caliphate by blood. Administratively, Baghdad is the capital of the empire and then Samarra', other regions and cities were ruled by a ruler called Al-Wali who was chosen by the caliph. On the religion side, Islam is the religion of empire. The other religions, such as Christian and Judaism

were free. Non-Muslims paid ransom, and Muslims didn't harm them and they were responsible for protecting them. From economic side, agriculture is flourishing, orchards is thriving. From educational perspective, Baghdad became a center of attraction for students and scientists. From all parts of the ground, the first school had been established (Al- Mustansiriya School), a lot of sciences had been developed and translated from Arabic to other languages and vice versa, libraries were filled by books, and more scientist were raised in different fields.

Under the late Ottoman occupation period and till the establishment of Iraqi Kingdom, Baghdad suffered from fear, hunger, starvation, injustice, absence of education, and diseases. Baghdad carries the ruin of Islamic Empire. Politically, the people were against the Ottoman Sultans, because of stealing the wealth and giving no services in return. Social structure was divided and built according to gathering living, and there was strong relationship between populations. Administratively, Baghdad, Mosul, and Basrah are three main regions that were under the Ottoman Empire rule. From the religion perspective, the society consisted of Muslims, Christians, and Jews but Muslims were the majority. No schools and no education accepted the religious schools. In this period, traditional Iraqi houses had been formed and still survive.

The long laps between the periods have been seen and the importance of each period can be typified by social structure, religion, historical background, and the difference in environment. These factors affect the research to select these different periods in order to compare and analyze these great periods as empires led the world and in this important period that traditional houses were formed. The new design of houses in Iraq today never represent its civilization and identity, it is a crossbred style, not an expressive lifestyle.

In this research, will highlight on how lifestyle effects each period to form the house, and compare each period with others and conclude the characteristics and features of each style to be applied in the modern Iraqi houses, especially sustainable features that represent Iraqi identity.

1.2 Research Question

This research is trying to find answers to several questions. First of all, we want to find the causes of absent and loss the identity of Iraqi houses. So, the main question is what are the original features of Iraqi architecture? And what is the identity of Iraqi architecture? Second of all, to answer the main question, secondary questions must be answered as the starting point of the research: How does culture affect Iraqi lifestyle and form houses? What are the fixed and varying things in Iraqi lifestyle? What is the difference between traditional and modern houses? What is the influence of globalization on the design of the houses? Finally, the research will answer the last question of what lessons to be learnt from traditional Iraqi houses? The answer will be used as a framework or guideline in modern houses.

1.3 Aim of the Study

The research aims to find the unique features and characteristics of Iraqi house architecture, by analysis and comparing houses and palaces in three different periods and also, how lifestyle affects each one. Moreover, the research aims to find the original features, identity and style of each period. The research aims to prove the sustainability of traditional Iraqi houses. We will try to correct some misunderstanding that was written about Iraqi houses and its lifestyle. Furthermore, the research aims to produce a framework or guideline for architects who are interested in traditional identity to design modern houses.

1.4 Methodology

The research methodology is divided into two parts, the first part consists of study and analysis that depend on literature to study and analyse the culture and lifestyle in three different periods, from several aspects such as, social structure, family structure, education, sleeping, visiting, occasions, environment, manners, habits, and thoughts, etc. Scientific study in architectural side is to study and analyse the houses

and palaces in the same three different periods, from several aspects such as, physical shape, facade, openings, interior design, materials, style, roofs and grounds, etc. The second part consists of comparison of the three different lifestyle, architecture and interior designs (houses and palaces) and it depends on in the same elements of analysis. According to the research problem, the research design will be the case study by using analysis and the results depend on comparison, so the research is a qualitative method study, and the research is based on analyzing and comparison.

The research depends on primary and secondary sources such as, published/unpublished books, reports, academic articles and websites, in Arabic and English languages, about culture, lifestyle, architectural history, literature, travel, religion, and so on.

1.5 Terminologies

Privacy: There are more definitions for privacy such as;

“critical to our ability to create and maintain different sorts of social relationships with different people,” necessary for “permitting and protecting an autonomous life,” and important for “emotional and psychological tranquility.” It has been hailed as “an integral part of our humanity,” the “heart of our liberty,” and “the beginning of all freedom.” [74].

In the research study field, it means the isolation of vision and sound.

Manners: Manner is the good behavior such as, respect, speech, eating, and all life part dealing. It is the level of standards and mores of society.

“...Manners, on the other hand, relate to kindness and caring about others. Having good manners goes beyond socially acceptable behavior and relates more to how you treat others because you care about them, their self-esteem and their feelings. Good manners are under your control because they come from your heart”, [130].

Habits: are the repeated behaviors,

“Habits as for automaticity or repetition in daily activities”, [185].

Sometimes the social environment play a role in forming our habit, it is kind of a forcing habit to practice activities in our lives. For example, religious environment forces people to avoid wearing shorts outside houses, another example is that hot climate make people decrease the window size, and year by year it will become a habit in housing structure.

Environment: There are three main kinds of environment, the first one is the natural environment, that consist all of things relative to the climate and physical condition, and the second one is the man-made environment, that consists of cultural heritage, and the third one is the human environment, that includes regulations of food contents, products, safety issues, health and leisure. [70].

Lifestyle: Alfred describes lifestyle as “every individual has his own distinct life style that can be more or less similar to life styles of other individuals, but never quite the same... Besides being the root of individuality, life style creates the unity of behavior - of 'thoughts, emotions and actions, both conscious and unconscious” [7]. Max Weber talks about the mode of life or the style of life describing it as one of the three determinants of social strata development,

"The following are the most important sources of the development of distinct strata: (a) The most important is by the development of a peculiar style of life including, particularly, the type of occupation pursued. (b) The second is hereditary charisma arising from the successful claim to a position of prestige by virtue of birth. (c) The third is the appropriation of political or hierocratic authority as a monopoly by socially distinct groups" [184].

So, Max is in opposition with Alfred, he thinks that lifestyle applies to whole people groups, and the difference in lifestyle, in the structure of lifestyle depends on the power of individual, he also thinks that lifestyle is

an important factor to develop the social classes. Moreover, he thinks that distinct lifestyle is a result of an inherited social standing and monopolistic authority life style that determines unclear border of social classes. The modern definition of lifestyle is;

“The habits, attitudes, tastes, moral standards, economic level, etc., that together constitute the mode of living of an individual or group” [143].

Vernacular Architecture: The meaning of vernacular is sustainable, traditional, regional, more economic, local architecture, and local material. It reflects the culture and social environment. It is being sustainable when the right material is used to solve climate conditions, in right place. It is a method to be used to construct by using local available sources in a traditional way to represent the local needs, and usually tend to reflect culture, environment and history of the region, [151].

Tradition architecture: “It is the key reference point and hallmark of the community culture. It results from sharing knowledge and experience, and it transmitted and enriched from generation to the next.” [51].

In addition to using local material, adapting to climate conditions, construction techniques and aesthetic results from long historical processes that are more re-adapted during time [51]. The difference between traditional and vernacular is that vernacular is a trait or hallmark for a limited region, while traditional occurs in more regions, and the difference in technique sometimes is the trait of vernacular.

Culture: is our understanding of all things around us, the level of culture depends on our understanding and the meaning of social environment, and how to deal with climate and how to deal with time and how to deal with space and how to deal with thoughts and how to translate it etc.

“Culture, concept of the anthropologists and sociologists is coming to be regarded as the foundation stone of the social sciences” [26].

And,

“the inheritable of social practice” [119].

There are two kinds of culture, traditional and modern, the traditional culture is according to Stanely,

“Preferences for especially useful things and ideas in traditional culture work in the same way as natural selection: something does a better job or is more desirable in some way, so it becomes more common thereafter”. [127].

While he thinks that modern culture depends on technology, and the pace of life, without selecting and preferring between the better and worse. Another aspect of sub-kind likes in traditional; we can find vernacular, folk, and popular, and in modern; we can find high culture, media arts culture, etc.

House/home/dwelling: In the second UN Conference on Human Settlement in 1996 which was held in Istanbul, Turkey, a proper dwelling is defined as follows:

"A proper shelter is not only the existence of a roof over people's head. A proper shelter means proper comfort, a proper space, suitable physical approach and security, ownership security, structural stability, lighting, ventilation, proper heating system, primary substructure such as water, health-care and education, garbage evacuation, proper environmental elements, proper health factors, accessible to work place and accommodations and all these factors must be provided according to financial status of people" [173].

While the home is defined as:

“Home, in the first place, is an institution, not a structure for complex matters. For cultural matters, it is under the influence of culture. Even at first, the concept of home has not been a totally functional space. The positive point of creating an ideal environment for the family as a social environment points to home as shelter, but the important thing is that this makes sheltering as an

obligation for this social institution. From the first day, man created his home because of his beliefs in rituals and cultural issues” [160].

In general, house/home is the private space to secure us from other things, and expresses the relationship to the environment and expresses our identity. While dwelling, spaces can be arranged to provide us with several human needs such as security, relaxation, ventilation, lighting, heating/cooling system, and other primary facilities such as, water, sleeping, education, etc.

In Next chapter will explain the aspects of lifestyle, and get brief idia about almost aspects that can affect the desighn of houses and palaces.

CHAPTER 2

ASPECTS AFFECTING IDENTITY OF HOUSES

There is no exact similar study to research, the existing research explained architecture features in each period, in addition to the literature mentioned the lifestyle in general way. Although sources expanded the knowledge and background, by providing with analyzing tools and helped the research to discover the obscure things in each part of the research. The advantages of sources support the research in several things; first in studying, identity, lifestyle, culture and knowing the deep meaning of each term, and supplying the research with each general and specific features and characteristics of each period. Second, developing the skills how to analyse the lifestyle and houses/palaces and know the influence of lifestyle on houses/palaces. Third of all, this background supports research to save time to select methods from analysis and compare some another examples. Finally, sources give the research large feedback about the points that do not need to be researched as they already exist.

The sources supplied the research with the prepared plans, pictures, sections, and elevations that are used in analysis work for traditional, old and modern houses/palaces, Large number of books and articles discussed, culture, lifestyle, Iraqi houses/palaces in different periods that support the research with more and more information about the topic. Few sources discussed the development and modern architectural style in Iraq which incited me to research this topic, in addition some wrong point of view about the analysis of Iraqi houses that come from lack of full knowledge about Iraqi social structure, and may be because of an attempt to harm by falsification of the facts.

Several theories emerged to discuss and putting framework or to criticize the houses that are never considered with culture and lifestyle or environment. The job of architecture is to provide people with the space that have several features such as,

comfortable, safe, climate protection, privacy, inner/outer communication, relaxation, isolation with all boundaries according to users, reflect user culture in each detail, and all what culture, lifestyle, climate and social environment mean. According to these factors and elements, researchers have written a lot about these elements and factors, Bourdieu (1984) orders designers to study and collect information about social status of user, he thinks it as an important element to designers [60]. In the same viewpoint, Thomas Hojrup (2003), pointed out the importance of information about professional status that helps designers to determine the user requirements [104].

2.1 Culture/ Lifestyle and Design of Houses

There are several books and articles discussed the meaning of culture, such as (Hans, 2012; Stanely, 2010),

“..., runs from culture is learned and transmitted from generation to generation, to culture as a matter of ideas and values, a collective cast of mind. The most general and most common anthropological description of culture is indeed: the way of life of a people. Culture also can be characterized as the whole of material and immaterial forms in which a society is recognizing itself”, [96].

Hans believes that culture moves from generation to generation by learning and by understanding ideas and values in a collective way, and he thinks that culture may be material or immaterial that means it can also be moral that we understand it from other aspects of life such as speech.

Stanely made a comparison between traditional and modern culture. He upholds and believes that world must cling with the traditional culture, because it was based on more respect, more social connection, more taking care of the environment, and he thinks that life was more beautiful than modern times because the modern is based on pace, continuous change, weakness of social connection, harming environment, less respect, small family instead of large. Finally, he believes that:

“I believe the shift from traditional to modern culture was one of man’s greatest falls from grace” [127].

He describes the culture as the way of thinking and it represents the relationship between people and the world, and this is the similar point between the traditional and modern. In the same way, Hans thinks culture moves through generations, and he considers this is also the similar point between traditional and modern.

“In some ways, traditional culture and modern culture are alike. Any culture is a system of learned and shared meanings. People learn and share things over the course of generations, and so we say they are a culture. Traditional and modern culture function similarly because both are ways of thinking, ways of relating to people and to the universe” [127].

Stanely sees that the difference between traditional culture and modern culture is more important than similarity, because change of relationships between relatives, and between people, change of family structure that has become disjointed and small, as we called - nuclear family - instead of extended type. He describes the communication in traditional culture and how important it is that everyone helps each other, supports each other in each condition, there was more and more kindness.

“While traditional and modern culture may be similar in some ways, in some very significant ways they are clearly different from each other. Traditional culture, such as our human ancestors enjoyed, is held together by relationships among people — immediate family, extended family, clan and tribe. Everyone lives nearby. Everyone knows how he or she fits into the mix because relationships, and the behaviors that go along with them, are clearly defined. “Brother” is someone toward whom I must act like a brother. “Uncle” is someone from whom I expect a certain kind of behavior. If I violate what is expected, everyone will know. Perhaps there will be severe consequences” [127].

The relationship between traditional and modern culture is that the modern culture is based on self-interest in terms of power and benefits, while in traditional culture; the relationship is based on social principles, moral values, such as neighborhood, friendship, relatives, and so on. According to Stanely’s compression;

“In traditional culture, relationships and people seem to be what matters...while In Modern culture seems to be held together by power and things, not by people and relationships” [127].

2.2 Religion and Design of Houses

Another writer and students see that religion has an influence on the design of houses especially on Muslims lands. One of them Raya Ani, believes that courtyard in

traditional houses in Muslim countries is designed to segregate the women, because Islam orders women to remain inside the house and she supports her theory by Great Qur'an (Al-Noor Sura), and she thinks that the courtyard is like a prison for women, and modern Iraqi house is not enough to represent the identity of women's liberation and unveiling in the modern Iraqi state.

“The new propaganda promoted a generalized mythical image of women as a worker and a mother with children” [163].

Erpi has a similar point of view to Raya, and he thinks that Islam is the world of the men and women must keep inside the house under her outfit, veil, and behind window grills describing an introversion world, in addition, he thinks that houses are similar in all Muslim regions.

“...characteristic of the house, i.e. the introvert setting, can be attributed to the constraints imposed by the Moslem religion. Islam is a men's world. Women in Moslem societies are segregated from daily life. Their direct contact with the outer world beyond the home is frowned upon. Women are kept under their outfit and veil and behind window grills. Consequently, the house where women live, does not expose itself to outside traffic, but shuts itself in an introvert setting.” [83].

When Abdulace (1982) describes these kinds of houses, he mentioned that this kind of traditional houses are seen in western cities such as Greece and Rome [6], in the same way. Schoenauer (1962) and Al-Dawoud (2006) has written about the courtyard in Italy in Atriumin building [21] and in Greece and Rome, as well as how China houses are built around a courtyard [172]. On the other hand, others believe that the courtyard is a function of climate rather than religion [16].

2.3 Climate and Design of Houses

Regarding the climate and privacy, courtyard houses is so famous in hot and dry climates [16], so we can find it in heritages of previous civilizations in Mesopotamia in Sumer [109], [150], [183]. In early Islamic architecture, especially in Abbassid period, in traditional Iraq, Turkey, Syria, and Iran, these traditional and heritage houses are designed according to culture and lifestyle, according to needs, according to thoughts, and as an artificial environment. These traditional houses have

movements around courtyard horizontal and from basement to ground floor to the roof vertical, according to day time and according to seasons [6], [171], [17], [18], [136], [158].

The form of houses is the result of the culture environment, and the organization of a house is a result of socio-cultural factors such as habits, as well as the social and family structure [160]. In addition, Rapaport thinks that novelty is not desirable, so traditional architecture has almost not changed. Moreover, Knick (2010), explains the difference between the modern and traditional together with environment as follows:

“Another way in which traditional culture and modern culture differ is in their relationship to environment. Traditional cultures lived in close contact with their local environment. This taught that nature must be respected, cooperated with, in certain ritualized ways. One did not make huge changes in the environment, beyond clearing fields for agriculture and villages. Society saw itself as part of nature; its spiritual beliefs and values held humans as the kinsmen of plants and animals. In contrast, modern culture creates its own environment, exports that cultural environment to colonies in faraway places. It builds cities and massive structures. It teaches that nature is meant to be manipulated, to be the source of jobs and wealth for its human masters. It sees itself as being above nature. Its religions commonly cast humans as the pinnacle of nature: at best its paternalistic supervisors, at worst its righteous conquerors” [127].

“If you have an accepted model which everyone takes for granted and you merely have variations on it , then one of the results in terms of product is that the environment communicates very clearly because the model is shared by everyone. The results are environments and settings that have very high degrees of relevance to people who, therefore, use them in very appropriate ways. Thus, there is a good fit between the life-style and the environment” [161].

2.4 Thoughts/ Ideas and Meaning in Design of Houses

For another form of scientific research that studies signs and meanings in human thought and behavior, thoughts are one of the roots of culture for common people and society, thoughts are the awareness of what people understood and their attitude towards social environment and other cultures. Professor Mary Douglas is a famous researcher who has written in this field and she thinks that we may not be aware that

we have styles of thoughts, in addition there are a range and different styles of thoughts that may be trite or refined and she discusses the ranges of styles related to folklore, religion, shopping, etc., [79].

Culture whether it is traditional or modern it must be well adopted to local conditions, in order to work best. For example Bedouin culture doesn't work in cities, because the local conditions changed which means understanding things around us differs according to our conditions and level of our culture to be able to translate the thoughts and ideas into the houses.

2.5 Space and Social Aspects: The Relationship in the Design of Houses

Hillier (1984-1996) who has written about the space and its relationship with building, he pointed out that spaces have qualities and characteristics that would influence people's interaction using these spaces. So he suggested that building have two social dimensions:

“..buildings operate socially in two ways: they constitute the social organization of everyday life as the spatial configurations of space in which we live and move, and represent social organization as physical configurations of forms and elements that we see. Space creates and controls the interfaces between different categories of people and their interaction with objects” [10].

Therefore, if spaces are designed in the wrong way, the natural patterns of social co-attendance in space will not be achieved, it does not mean the wrong design but it means this building does not do its function. The study above suggests that lifestyle is inspired by local traditions, culture and principals aspects, and other needs of the user were respected and considered by designers and the user will be more satisfied about the architectural product. But if the designer/architect abandons the lifestyle aspects, the product will be poor, unpleasant, inflexible and uncomfortable. This disregard of lifestyle and culture and environment will harm the owner and users of the building, in addition it will destroy social structure.

2.6 Traditional and Vernacular Houses

According to Maslow's hierarchy of needs, notice that the physiological needs is the foundation of the pyramid. Maslow suggested that the first and the most basic need people have is the need for survival: their physiological requirements for food, water, and shelter. People must have food to eat, water to drink, and a place to call home before they can think about anything else [71]. So home is an important need of human, and it is considered the base of any civilization in the world, in addition to other public buildings. But the houses represent the needs of the population, how they understand and deal with environment, how they translated their culture into material things, how they reflected their lifestyle in the house. The house is the base of the life, and it is the mirror of our culture and it is the space that we practice our lifestyle.

Amos Rapoport emphasizes on the relationship between environment and building, in addition, he is concerned about culture and lifestyle that he considers them as a complex system that never work separately. Because people not just live in a building, they live in a system of setting, so we have to study vernacular design rather than vernacular architecture, we must take notion about settlement system of the houses, and behavior setting system, because people live and move through environment organized in time and space. Basically, we can look at vernacular either as a process or as a product [161].

Rapoport (1979) deals with vernacular architecture and uses examples from traditional culture, when studies of man-environment interaction start to emerge, it became more important to redefine vernacular and what the environments contrasting with it are. In brief, vernacular is:

"polythetic definition", using, in other words, a number of variables so that the definition is not a tight one but a "statistical" one. If a particular environment meets "x" percent of the criteria then it is what we call vernacular" [161].

2.7 Sustainability of Culture, Lifestyle, and House

There are many people who are going backward, backward to traditional values, lifestyle, social structure, traditional houses, traditional manners, habits, customs, and so on, because they think when they are compared with modern life, it is considered better than modern. I think, it belongs to our nature, that like social communication in all details of life, it is instinctive trait in human beings. Knick (2010) says;

“These differences in the way traditional and modern culture perceive and interact with the environment have various consequences for the humans in those cultures. Not the least of these is the difference in sustainability. A culture that lives in relative harmony with its environment has a greater likelihood of sustaining itself than does a culture that destroys its environment. The culture of our human ancestors existed for thousands of years without doing any substantive damage to the ecosystem. In a very few centuries modern culture has eliminated or endangered numerous plant and animal species, degraded many waterways and negatively impacted the health of many of its citizens: “better” living through chemistry!” [127].

In addition Rapaport (1979) describe culture as;

“The culture and its expression is related to certain social and political conditions and certainly, the culture although culture, like environment, needs to be broken down into smaller pieces” [161].

2.8 Architectural Identity and Meaning of Place

Identity is a complex term and it can be used in almost all fields, because it has indistinct borders [62]. So identity can be used together with more terms such as culture identity, place identity, social identity, architectural identity, built environment identity, and so on. So its definition depends on the word/term that follows it. Because of indistinct borders of this term, researchers use and employ other words to represent the identity such as “lifestyle”, “values” [100], “Personality” [164], “Social Attributions” [187], or “Social Status” [146], [99]. Other definition for identity says;

“states that identity is created both internally in the mind, and through the body’s interaction with the outside world – there is no place without self, and no self without place” [66].

This description of the strong relationship between self and place gives us the answer of why architects who are interested in traditional values always look for place

identity or architectural identity. We can define it as the term that refers to the reflection of our culture and lifestyle in our built environment or our buildings in the place that we live in. There are more and more factors that influence architectural identity, such as “genetic, social, and cultural” [99], as well as the time which is a very important factor that plays a role in the changes of architectural identity. Finally we can define architectural identity as distinguishing character of our personality, lifestyle and culture through the physical elements.

The term “place identity” is also important in this research to its relationship with users, place is where we practice our activities, and it carries more and more meaning for us like our roots, our history, our memories, our identity, our experiences, and so on. Place identity is described as:

“pot-pourri of memories, conceptions, interpretations, ideas, and related feelings about specific physical settings, as well as types of settings” [156].

The place affects the persons who live in there, we start to identify ourselves with places in both large scale in terms of nation, city, etc. and small scale in terms of workplace, home, room, etc. [92]. People are decorating and arranging their houses, gardens and workplaces in the way that they prefer, so these places are reflect their identity and who they are [76], [73], [146], [162]. The definition of place identity is complex and carries an important meaning, for example, term “place attachment” is defined as the “feelings we develop towards places that are highly familiar to us, i.e. places we belong to” [45]. There are more terms to describe the place like “sense of place” is described as “an awareness of a positive feeling for a place” [180], “rootedness” described as “a feeling of being home” [180]. In addition, the place is defined as;

“A dynamic and interactive perspective on the environment includes the social, cultural and psychological meanings of a place”, [89], or “place is a geographical space that has acquired meaning as a result of a person’s interaction with the space” [89].

Three major theories about identity, place identity theory, social identity theory and identity process theory, were selected that is more relative to research subject among many theories about identity. Place-identity theory considers the base of self-identity, for example in gender and social classes, and place-identity includes perceptions and

comprehension regarding the environment. And we can divide these conception and perceptions into two groups, first type consists of thoughts, values, memories, and settings, the second type consists of relationships among different settings, like home and neighborhood [157]. In other term, it is clear that built environment influences our lifestyle and how we behave, for example, tourists wear veil when they visit honorable Kaaba, and it will be their behaviour if they live there for a long time, till it becomes one of their habits. Place-identity changes happen through the life time of persons [157], five central functions of place-identity were described as recognition, expressive-requirement, anxiety, meaning, mediating change, and defense function [156].

Second theory is social identity. The social identity is defined with knowledge of the self-concept, in both its statements, the similar and dissimilar to other, in individual and in group.

“We can define ourselves with qualities that characterize the groups to which we belong” [103], [178].

So, social identity depends on the quality of groups that we belong to, or to positive references, such as, culture, religion, family, neighborhood, nationality, etc. social identity is based on self-esteem and we always look for positive self-esteem. If we cannot preserve it in our group that we belong to, we directly look for new group to join for more positive self-esteem. Otherwise, we will be looking for negative self-esteem as positive by trying to give it another meaning by reinterpreting positive self-esteem [177], [181].

Third one is identity process theory:

“Identity in this view is seen as a dynamic, social product of the interaction of the capacities for memory, consciousness and organized construction” [99].

Breakwell (1983, 1986) who formulated the theory, thinks that identity can be seen in both structure and process, the structure can be through, action, thought, and effect. So, this theory claims that there is no difference between personal and social identity. While it suggests that the difference is between values dimensions and content dimensions. The content dimension consists of personal and social identity,

while the values dimensions consist of positive or negative values of personal and social together [61], [62].

Different principles are forming process identity, according to culture and within a culture, these principles will change over time and through situations, Breakwell, 1986). Place is significant source for identity elements, Places have no constant meaning, their meaning is re-confer continually, so, their contribution to identity is never the same [61], [62], [182].

2.9 Meaning of Life Style and Its Aspects

Our habits, customs, traditions, vernacular manners, beliefs and rules are highly and complex system combining all our culture to form our lifestyle (see fig. 1), this lifestyle is held by a specific group or people or individual [7]. This lifestyle system includes everything and every detail that we do, so it differs from region to region, from country to country, from person to person. In general, we can call these kinds when almost all people do it as national culture, while if few people do special or unique aspects of life, we call it subculture or vernacular [147]. For example, in Iraq almost all Muslims and Christians have the same traditional way in marriage ceremonies, while marriage ceremony at the Yazidis is different, the male and female who wanted to marry, the boy comes and draw a circle around the female when she is alone, and then takes her and disappear from the eyes of their parents for about a week, then their families look for them if they find them they will be killed, but if not, they will be married, and after this week they can go back home.

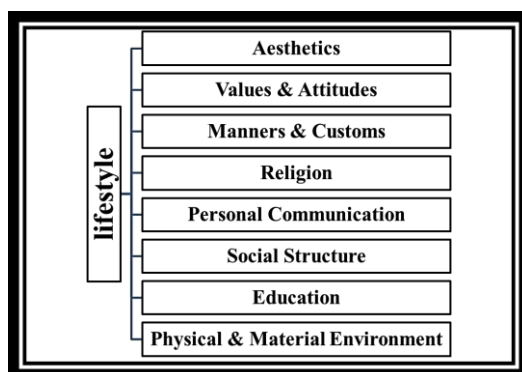


Figure 1 Lifestyle Aspects (Researcher)

The meaning of lifestyle is so complex and carry more details. The difference between the culture and lifestyle is based on integral relationship. Culture is our understandig the things around us and what meanings, ideas, thoughts etc. are [26]. And the level of our culture rises whenever our capacity expanded to undestanding and analysis of nature and non-nature. Lifestyle is the practice and applying our understanding to things arround us. So the relationship is so strong, so interpenetrated, and it can not be separated. And we can say that lifestyle is the tool to measure the culture level, or it is the mirror of culture. And we can say that culture is the foundation of lifestyle.

2.9.1 Aesthetics of Lifestyle

Aesthetics consists of selection of colors whether in clothes or in buildings, taste of arts and culture level of population. How the right shapes and structures are selected form aesthetics [147]. Aesthetics is an important criteria in lifestyle as it expresses the developed level of culture and lifestyle [100]. Even the choices of people is an factor that refers to lifestyle, for example according to my experience, people with more culture especially in hot places tend to choose light colors, as a mean to represent their high lifestyle, because they usually live in more clean places, and take care of their clothes, and wash them daily. While lower class tend to choose dark colors, to cover the dirt in their clothes, because they usually do not wash their bodies and clothes daily. Even selection of colors for interior design, the same concept clearly appears.

2.9.2 Values and Attitude

Values, that everything has relationship with emotion, such as ideas that we are attached to. Values include several concepts such as honesty, freedom, responsibility, duties, marital faithfulness and obligations. When some values come from other cultures, they are sometimes resisted and sometimes accepted. In the same way, within time, some resisted values become popular. Attitude is the evaluation of subjects and concepts, whether in negative or in positive way. Attitudes are dealing

with important matters, so it is learned by role models, such as parents, teachers, and religious leaders. And we find the attitude more flexible than values [147].

The concept of values is very important, it depends on understanding because it is based on moral themes, and for example, the understanding of freedom is different among population. It means that you are free, but in fact you are limited, with more boundaries, such as, you must not harm anyone, and violate his rights, you must not disturb people, you must not go out naked etc. Understanding freedom leads us to respect and take care of our neighbors, environment, roads, parks, and public areas and keep it healthy and clean. The attitude may be similar or may be not, it depends on the level of our understanding, our environment takes large part in our understanding of these themes such as school, religion institution, parents, etc. Finally, more values and right attitude mean more developed lifestyle and the result means stronger social structure that means strong neighborhood relationships. The house design is more affected with social structure that affects lot, elevations, and neighbor principles.

2.9.3 Manners and Customs

Manners are represented by appropriate behavior such as speaking, dressing, and the way that we welcome the guests and our hospitality etc. The etiquette expresses the manners in some way of lifestyle for example, in drinking tea or coffee and in eating. Customs, old behaviors/habits through generations or in specific situations, for example exchange food between families in Iraq and Arab countries in Ramadan [147]. In addition, there are two kinds of customs: folk and popular. The folk custom is the behavior practiced by homogeneous group of people through several generations, like wearing turbans by Muslims in southern Asia, while the popular custom is the behavior practiced by heterogeneous group or by several groups, the folk becomes popular if it prevails to other countries [100].

The perfection of human is measured by his manners, that we can call it art of dealing or as etiquette. Manners mean to obtain love from other, respect, high situation, and good reputation. Developed populations are concerned to separate

good manners, in order to form lifestyle based on humanitarianism. The concept of humanitarianism is teaching people love and indulgence, to build society living together with more communication, and more help between each other, on the other hand, working to develop people's thoughts and ideas through anthropologists, to encourage people for discarding bad customs that affect to disassemble societies and relationships. Because correlative societies build while disassembles societies are destroyed.

2.9.4 Social Structure

Social structure is the system of social positions and their relationships. It has three elements differing from culture to culture, social group associations, social status, and social mobility. In social group associations, there are two types of families: nuclear family, consists, parents, brothers, and sisters and the second type is extended family that consists of nuclear family, grandparents, aunts, uncles, cousins, and relatives through marriage. Important thing in social group associations is gender; the term that refers to sex: male or female [147]. The extend of family is an important factor to determine the size of houses, in traditional culture, extended families were so common that societies were so correlative with strong relationships, and life was simple and based on help and cooperation principles. In modern culture that encourages small families, the nuclear type became so common, the relationships became poor day by day, and societies disassembled.

Social status is another element of social structure; it means the positions within social structure. The social structure represents the classes of social structure, [100], social status has three criteria that determine it, family heritage, income, and occupation [147]. Here, there is a need to compare modern and traditional culture against the social status, in traditional culture, classes are founded clearly while in modern culture they are founded in hidden, and in intangible way, for example, in developed populations, high classes are still called the nobility, it expresses the heritage of noble family, while in traditional, it clearly named, such as, slaves, public people, kings, and so on. Islamic principles stand against this concept and tell people that there is no difference between white and black and between Arab and non-Arab,

and between tribe to tribe, all are equal according to Hadith Sharief. In western populations that are not developed enough, most of people respect the ones who are richer and possess a critical position in state, while we see the government officials in developed population walk and ride public busses. The situation and the respect that is based on income and occupation is fake, and it is end when the reason disappears.

Sociologists, such as Al-Wardi, (1994), say, fortunately, Gandhi was not born among the Arabs. Had this man lived among us, he would have been blamed and scolded. We used to respect the affluent and huge persons. And we will not get in our world is on them, unless we change this vicious habit [46].

The end element is social mobility which means moving up/down social classes [147], in some cultures, it is easier while in other it is so difficult (social ladder) [100]. In almost all countries, they use two systems to regulate social mobility, cast system, and class system. Cast system means the system of social stratification in which people are born in cast or social ranking with no opportunity for social mobility. Class system means people have ability and action to determine his social status and mobility. It is the most common form of social stratification [147]. The first type of the cast system is found even in traditional, it is found just in the same countries that divided its population into two classes, for example in Iran, the government treat Arabic with an Iranin nationality, they live in south of Iran (Ahwaz), when they move to another city, government gather them in limited places, and these places are not equal with other city in terms of service. When I ask them the reason, they say because we have Arab roots and we are second class. The class system is so common even in modern culture, people can develop themselves by education, earn money, and have good behavior, then he can move in social class and he can change his place and build his new house.

The importance of social structure is continuation of societies that urban planner always looking for solutions that increase the relationship between families in housing projects. Most modern societies suffer from slow death, because of society isolation. In a history study continued for nine years, under the title “understanding

of the impact of the social environment on health”, the study concluded that most socially isolated people with less social relationship and communication compared to the others were at the highest risk of mortality [58].

Other researchers in Georgia, Michigan, and North Carolina confirm the importance of social relationships, and these reserches also encourage and concern about family relationships, friendship, community groups, and member in temple, or church [106]. From above we find out the importance of social structure that is based on social relationship.

2.9.5 Religion

From religious beliefs come human values. Different religions affect our lifestyle, and give us special view of it [147]. The religion plays a role in variety of individuals and population through many generations, also strong sense of support and connection. Moreover such practices have an effect on our lives like well-being, it is found to be positive throughout lifetime. Spiritual and religious practices affected the city and houses design through past centuries. Rituals or rites that are practiced such as baptisms, circumcisions, play role in the design of the houses, and take part in social structure and communication. So, religion is a means of communication and builds relationships between social members.

Religion is the way to separate the peace in population, because it separates and encourages good manners and habits, and strong relationship between people and populations, religion is against classes that divide societies if it is applied in right way. On the other hand, religion becomes a problem, if it enters to politics, because religion is between God and person, and just God is reponsible for religion. In modern period, especially now, we see the worse influence of it on societies, by whom disguised under the religion. More and more societies are killed, cities are demolished, populations emigrated, weakness of relationships in social structure occur. So we can conclude the importance of the influence of religion in forming houses and social/family structure.

2.9.6 Communication

It means to convey feelings, information and knowledge through actions, writing, and speech. The key of deep understanding of culture/lifestyle is language which it represents written and spoken [147]. Communication is different in modern and traditional societies. In modern societies, communication is so developed, more and more means of communication is invented such as television, radio, phones, internet, in traditional culture, the communication depends on travelers to hear about other populations. The culture in traditional continues and lifestyle continues for a long time from generation to generation. Today in modern culture and lifestyle, world became a small village, we hear the news immediately, and it is so difficult to catch up with the pace of life, in all its fields. Culture has been changing very quickly, our sons oppose our culture, and their thoughts differ from us, it is the globalization, in my opinion it is quickness of change and influence. Almost all people are against the pace of life, anthropologists stand against the pace of changing and modern culture, tell that it do not carry the spirit of humanitarianism, [127].

The new way of communication may cancel some part of houses, for example in last year, I visited Iran, and the translator was from Tahrán, when I asked him about social structure in Iran, he told me that the relationship, today in Iran are built on new communication tools. Cellphone is the best communication tool, and he added, when my brother or my sister needs to hear from me, they just call me, and we never receive visitors in our houses. I said to him you have to cancel the reception in your houses, he said it is our culture. This weak relationship in my opinion is so dangerous, in near future, the house will be smaller that is just for sleep and wash.

2.9.7 Education

It means learning all things in life. People get education through schooling, teachings, parents, religion, and families provide informal instruction about customs, traditions, and how to socialize with others. Other applied sciences are learned in educational institutions. There are two important elements in education; education level that determines the percentage of educated in gender as well as according to

ages, the second element is brain drain phenomenon that is highly educated people depart to another region, nation, country, etc. because of economic, political and security reasons [100].

Usually, in almost all third world countries, there is a gap in education level of male and female. This gap occurs because of several reasons; the important reason is religion, especially in Islam. They believe that women are private and woman must not go to school in order not to be seen by foreign men, especially in Ottoman period. They ordered clerics to teach parents not to send their sons and especially girls to learning reading and writing. Al-Wardi (1950) mentions in this period the cleric scientist - Al-Alosi - wrote a book called "Goals to prevent women from teaching" and he mentioned how that effected the teaching. Moreover in the same book, Al-Wardi criticizes Iraqi society because they prevent girls getting education, and when the disease infects their women, they are looking for a woman doctor for their treatment [47].

The teaching, since ancient times, is the base of civilization and development. Teaching is reaching all our life fields, and it is the main means to catch up with the speed of development. Without teaching, no civilization and no building happens. The important teaching for research field is to understand and be in touch with modern materials, that are used for building, and what the features of each material are, and if it is suitable for our environment or not.

2.9.8 Physical Material and Environment

Material and environment influence culture heavily, such as topography, climate, and lifestyle such as clothing, work time, etc. [147]. The culture represents the lifestyle of each region, at the same time, the lifestyle changes either for best or for worse, any way the change come from contact another culture or what it called cultural diffusion. In last year's cultural diffusion, change affects more aspects of lifestyle in all countries. These changes in our lifestyle come from development of technology such as internet and satellite television, globalization, new concepts became rolling although it is in one day was forbidden.

Environment is ours, we must take care of it and we should not harm it. Traditional lifestyle considers the environment as their second exterior house, they lived in it in a way, for centuries without harming it. In this environment, they eat, sleep, work, and practice all the life requirements. They construct green buildings to be friendly with environment. In modern lifestyle, there is especially the problem of global warming because of using gasses that affect the layers of atmosphere. Researchers and governments today look for alternative means in all life parts, for example, energy sources, green buildings that are sustainable and friendly to environment, and so on. Many studies encourage going back to traditional buildings to get these requirements.

Finally, we must believe that lifestyle is based on thoughts and these thoughts are changed or remained. During the pace of life, we must catch up with the speed of development. Globalization affects us in almost all life parts. If we do not convoy, we will never be developed, but at the same time, we must be careful about our selections. Sociologists describe the changing of thoughts as the ideas are like weapons which change daily, and who remains clinging with his antique thoughts, is like someone who wants to fight a gun weapon by Antara Bin Shaddad (one of great Arab fighter, from pre-Islamic period) weapon (sword), [46].

In Next chapter will explain aspects of lifestyle, and analysis the houses and palaces in each period that selected in this research, in order to know the effect it in design of houses and palaces. Next part of chapter will start with earlier civilization period.

CHAPTER 3

LIFESTYLE AND CHARACTERISTICS OF BUILT ENVIRONMENT IN IRAQ REGION IN THREE DIFFERENT TIME PERIODS

As it has been discussed in introduction Iraq, earlier called Mesopotamia, had passed through different civilizations cultural periods, three of them are more prominent because of the time span and on their effect on world history, especially in sciences and architecture field.

1. The earliest of all is Sumerian, Babylonian, and Assyrians, times, (4500 B.C-337 A.D.) where many scientific and cultural achievements took place, and they created a base for the future civilizations.
2. The second period is during the development of Islamic Empire, the Abbassid period (750-1258 A.D.). During Abbassid period, Baghdad became the capital of Islamic Empire, and it became the center of the world in terms of development of sciences, knowledge, and lifestyle of new way of understanding Islam. After Baghdad, Samarra' became the capital of Islamic Empire, Samarra' was similar to Baghdad, it was famous with its palaces, and architectural developments, in addition to mosques.
3. The third period is the late Ottoman Empire times, last nineteenth century, and early twentieth century, before the establishment of modern day Iraqi government. The importance is the remnants of this era are still within environment of "old city districts" of modern day Iraqi cities. Therefore physically they have an influence upon modern urban layout and building types.

3.1 Earlier Civilization Period (4500B.C. -337 A.D.)

Man was not created to live alone in this wonderful universe that have benefits, secrets, and fear, according to his instincts, old man tried and tried to know how to use, learn and protect himself in this massive universe. From that time started the first civilization of human in Mesopotamia in Sumer the first city in old history [166], (see fig. 2).

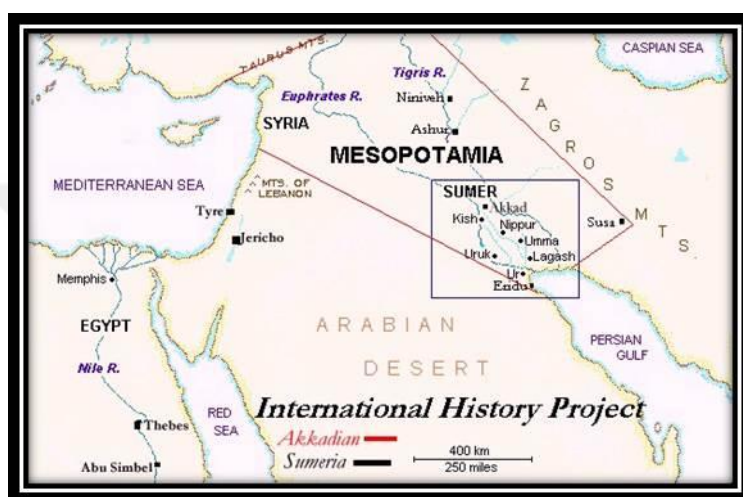


Figure 2 Mesopotamia, Sumerian Cities [189].

Sumerians learned agriculture and they planted in their fertile land several crops such as barley, wheat, grapes, beans, olives, flax, and palms as well as they invented writing (cuneiform) 3500-3000 BCE, so they archived almost all their life story. In addition, they learned trade and industry. Moreover, they learned several crafts that they use the products in their lives [166].

3.1.1 Lifestyle during Period 3000 B.C.–7000A.D.

Social Structure

The structure of population and social classes in old Mesopotamia is generally structured into six classes (see fig. 3). First of all, higher class that consists of the king of empire/city, Mesopotamian people believed that king was chosen by god (nature god) and he represents the link between them and the god, so he makes the decisions and orders by himself, he was the leader in battle, he was putting the laws, and his power came from god. Second of all, government officials and priests, both

of them were literate. The priests were explaining omens and signs, arranging the worshipping and ceremonies, receiving and keeping votive offerings. In addition, they worked as a doctor and dentists. The government officials were responsible for recording the events and empire affairs, as well as taking care of temple business and watching craftsmen that work in workshops in temples according to the priests' orders. Third of all, soldiers who represented defender upon empire and going with king to attack neighbor land to extend the empire. Fourth of all, teachers, merchants and craftsmen, the teachers worked inside the temple at first and then in schools beside the temple. They taught the sons of rich people, soldiers, priests, and land owner, as well as king's sons individually.

The Sumerians invented how to dig out the metals from nature, and how to mix them and make tools, learned pottery making, agriculture, etc. so they started to trade by using ships or land caravans. These were the merchant's job and they arrived to Indus River in India to replace their goods or sell it. The crafts included all social life requirements such as scribes, fishermen, astrologers, architects, shipwrights, jewelry makers etc. Fifth of all, the farmers and laborers received land from land owners, and the laborers were paid to them from the client. Finally the slaves, in four ways you may become slave, one of them as punishment of crime, other one if someone kidnapped you and sold you in another city, moreover, as a captive in war between region /empire and other, and if your family sold you to relieve their debt [118]. Sumerians classed themselves in three layers in mud tablets and in their stamps. First of all, high class consists of king, government officials and priests, soldiers. Secondly, middle class consists of, teachers, merchants and craftsmen. Finally, low class consists of, farmers, laborers, and slaves [120].

There are three elements that determine social status in societies, income, history of family, and occupation. So the system of social mobility in Mesopotamia was class system that means for family in general or for person individually can move up or down in social structure ladder, in their mud tablet, it is mentioned that some slaves who learn writing and reading that help them to get important position in empire. Moreover, the slaves who can collect money can buy his freedom to move up himself situation. As we mentioned more details about social structure, one of (Great King

Hammurabi) laws in his obelisk mentioned details about social mobility, cod no. 175 “if slave man who is subordinate by palace, or poor slaves married from free girl and she bore to him sons, slave owner has no right to claim his sons to be slaves” [11].

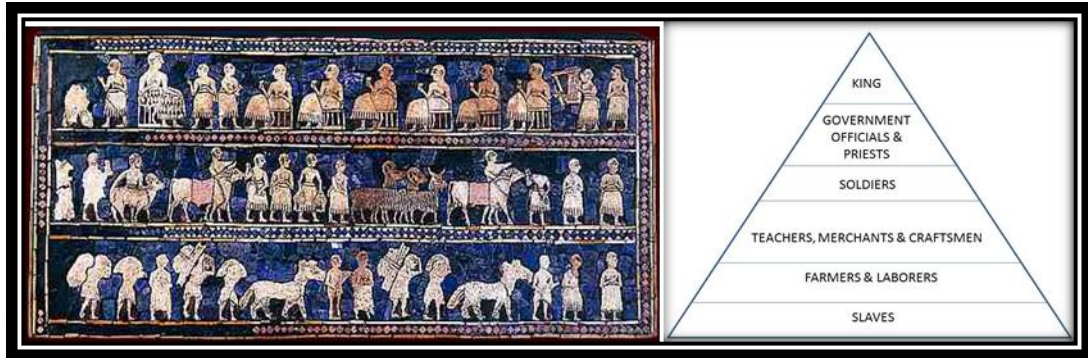


Figure 3 Hierarchical of Population in Mesopotamia [135].

Family Structure

Family contained father, mother, and sons as well as husband’s brothers, sisters, grandfather, and grandmother, in addition to the slaves in wealthy families. Family structure was either nuclear or extended system. Families in that period represented minimized model of empire that father has all authority with regards to his family affairs, and his sons help him, so they wish to have boys. Mother came in second rank after father to be authority in family affairs. Respect of father and mother was a holy duty, and who was undutiful became slave (according to king Hammurabi code). In Babylon Empire, they allowed women to learn writing, become priestess, and work in trade by hiring persons to send them outside cities, in addition to possession of property, this forms social group associations. From social status side, family’s situation depends on family history, economic situation and member’s occupation, whenever family history was in high class, its members have agood situation in social life, occupations and earning money move up the family layer. In the end, the system of Mesopotamia families in social mobility was class system that means each family can move up/down accordingly [43].

Family Member Duties and Working

Variety of social classes in Mesopotamia cities were built on injustice system, when priests represented god's persecuted people and obsess all what they have, maltreatment of religious rules led to establish civilian rule that day by day to get away from temple and priests injustice, and the king became the representative of god's wishes and as he was selected by gods, he started to put rules to protect all social classes. King became god and legislator of laws. At first, laws were not in all life fields like laws of Urnamo, Labit Iahar, and Ishnuna, in Babylon period great King Hammurabi put about 282 items in details in his famous obelisk, he organized all civilian life and he established the Senate whose duty was writing laws based on customary heritage that his practice of people in managing their affairs and resolve their disputes. Freedom, justice and equality were one of the basic ideas in Hammurabi Code (Alalag Ahmad Shaker, 2014). And we can see the obligations and duties for each class member and in details for gender (codes 1-5 refers to indictment and perjury), (code 94-127 refers to family rules in marriage and divorce, adopting and breastfeeding, incest, crime of adultery, etc.), (codes 26-25 refers to lands and houses rules), [11]. The other codes explained life laws in that period in all fields. These codes arranged their lifestyle by determining duties, freedoms, responsibilities, rights, etc.

Manners

The people of Mesopotamia were more civilized, more organized, more educated according to their period, which comes from the development, schooling, and laws. All these concepts come from deterring laws and power of the king. The strong order and personal statues putted in them laws witch educated them for good manners like respecting parents, for example in King Hammurabi code, item 195 says "If son insults his parents by hand slap, the son punishment is to cut his hand" [11], respecting neighbors, respecting women, rights of slaves, respecting work,

obligation, to avoid lie, cheating and indictment, etc. [43]. All these manners are written in great King Hammurabi's obelisk. While we find the punishment for a crime different from one class to another, we can consider this as a civilized way of classes. One of the folk custom in Mesopotamia was punishment by water, that comes from their belief with it, for example in King Hammurabi code, item 132 says "If married lady indicted because of another man, but they didn't see them together, she must throw herself in the river" [11], if she survives, that means she is honest, they believed that water kills guilty person [43].

Religion

Heritage has confirmed that people in Mesopotamia believed that people were created to serve gods, and to provide each thing that gods need, so people trusted priests because he was the link between them and gods. The priests lived in houses beside temple in the center of city. The priests ruled in both secular and religious authority, so they practiced injustice upon poor, orphans, widowers, the king Orokijena (2350 B.C.) was the first king who made repairs by reducing the influence of priests, new job for secular ruler called (Ensi) while the priests called (En) in Mesopotamia language [43].

Secular ruler supervised agriculture and trade affairs. Then the king was responsible for these two balanced powers. The king became ruler, high priest, made laws and the Great Gilgamish was the first high priest alleged that he is the son of god and two thirds of him came from god and one third of him came from human, so he became the link between gods and his people. While Great Sarjon was allegedly said that god (Ishtar) loved him and gave him authority and rule, so he called himself Right King or Legitimate King. The greatest empire had been established by King Humurabi (1792-1750 B.C.), Great legislator for the first law, the items of his law arrangement their lifestyle. Because of sanctity of king, they thought that he is welfare for them and their empire depended on integrity and health of king, so they found alternative king (shar-bokhi) concept [43].

The priests practiced astrology and explained dreams, so they told about dangers that will be happen in the future. So they chose someone to be alternative king and the king went his home with his family until the time of danger ended. Alternative king was getting all authority of original king. They thought that the time of danger took at least one month, if nothing happened they would kill alternative king, and if original king died the alternative would be the king [43]. It may be trick from priest's cunning to change king.

Cooking and Food

Ancient Mesopotamia people planted in their fertile land several crops such as, barley, wheat, grapes, beans, olives, flax, and palms, this abundance of grain enabled them to keep food as winter provisions, and increase their stability. They ate two meals a day. They used flax for several uses such as producing clothes, linseed oil, pharmaceuticals, meal, and nets for fishing. It became important yield because of its multiple uses. Moreover, date palms supplied them with wood, fiber, food, and fodder. Palm products were traded. In Acadian period, new yields like onion, lentils, and leeks were found. In addition, planting olive trees that was very useful to them especially its oil that use in cooking, lamps fuel, perfume, and medicines. Another food sources the grape that they use it beside food to produce wine. From animal domestication side, fish from Tigris and Euphrates was main food, as well as wildfowl that were found in marshes and they domesticated horses to use for pulling war chariots, and transportation carts, mule and donkeys as well for transportation, in addition oxen for pulling carts and arable land. As well as they domesticate sheep and goats to eat [54].

In the ancient cities they use ground flour to store, they grew it in agriculture. There was no limited place for cooking as room. They were using courtyard as place for cooking, and in weathers that could not use it they used any room for cooking, because of mobile ovens and kiln founded in these places. On other hand, the food in that period divided into two parts, first type, food that does not need to cook, like date, and second type, food that needs to be cooked such as bread [170].

Visiting (daily, weekly, monthly)

There is not enough writing about visiting in Mesopotamia period, but we can conclude that merchants hold ceremonies in them houses when they gain from them trade, and invited them friend and important person in neighbors, and other merchants to celebrate with them, and putting food and drink, [43], this for occasion visit. For daily visit, there is a kind of help between neighbors and it is till now founded in Iraq. That any women when she need something as soon as possible she go directly to her neighbors to take it especially witch related with prepare food. That is clear in King Hammurabi code, item 133, 134, 135, that talk about prevent woman to enter another houses during absent of her husband, because that may bring bad reputation for her husband, [11].

Sleeping and Sitting

Mesopotamia people used to sleep on the ground using reed and papyrus mat, and rugs that made from leather or wool of animals this is the ground furniture, [97]. While in king palace there are tables, chairs and beds, so they used furniture that consist, beds, chest, tables, stools, chairs, and footstools, (see fig. 4), mud tablet show as the furniture in that period seems richly decorated by gold, relief, inlay, using golden clothes, and gilded wood, [125].

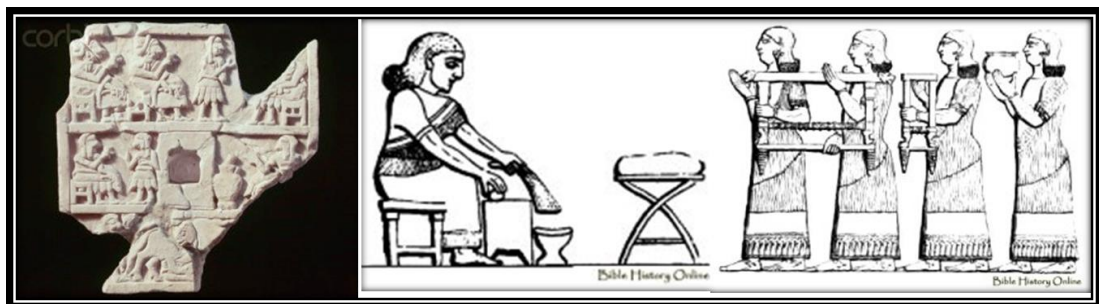


Figure 4 Chairs and Tables, Mud Tablet, Mesopotamia Civilization.

The middle class used the palm fiber in them furniture in addition palm branches. They used the first floor (roofs) for sleeping in Sumer because of height degree of temperature, [55].

Studying and Education

The important invention in Mesopotamia is writing, that considered biggest revolution in education field. This first writing technique stored and passed inventions information's in almost sciences fields [166]. The cuneiform writing keep and record all Mesopotamia information's, such as lifestyle, culture, victories, wars, agriculture, trade, industry, sciences, etc. each one was hope to learn writing in order to get good occupation, they learned boys, and left girls, because they were think that women must keep house according to them primitive thoughts. King sons were gain education in palace, and wealthy sons gain education in (Ziggurat) temple, while poor sons were deprived. The priests at first and them cum teaching students, they were punished student by whipped way [55]. Then they open schools and one they get teachers and teaching job became one of important crafts. Thousands mud tablet transferred to us carrying multi sciences, such as mathematics, geography, astronomy, poem, myths, etc. [43].

Occasions Choices

Mesopotamia cities lived in excessive luxury, according to two sources, first one is Greek historian Herodotus when he mentions what Persian's King Cyrus found when he capture Babylon city (539 B.C.), that he found feasts and luxury life, the second source is that Bible, says same words about this events. Luxurious and banquets are important part of Mesopotamia lifestyle. They were feast to celebrate all occasions' happiness such as coronation kings, weddings, religious occasions, victories, etc. They immortalize these feats and banquets in mud tablet, such as Ur feast, Assyrian king's Ashurbanipal (668 – 627 B.C.) with his wife reclining on chaise-longue and servants bring food and drink and play music, this tablet represent his victory feast against Elamite kingdom, this tablet called (garden party), (See fig. 5), [28].

Mesopotamia people loved music from earlier time, archeologists found in tombs of Ur one city of Sumerian, three harps and nine lyres, [81]. The important feast in Mesopotamia is (Akito) spring festival that consider Sumerian city the first who know it. They were determined year as twelve months and they see that April

became taking back so they reach that moon year decrease eleventh –twelfth days, for this reason they celebrated twelfth days in spring festival that start in harvesting season, each day has determined rituals.

The first fourth days for ritual of grief and purge and clean the temples. It is a ritual in very precise and important. A preparation for festival and carnival such as carts that transport gods, signs, etc. Fifth day called (atonement day) start with purge by mixed water from Tigris and Euphrates inside temple, offer prayers to the god Marduk and his wife Sribanetum and giving sacrifices, then priests carrying torches, censers, for perfume and cleanse atmosphere of temple, as well as trumpeting with louder voices in majestic collective prayers. The sixth day, called hope and promise, vanguards processions of ancient Babylonian cities start to enter city to participate in the ceremony, preceded by a procession of God (Napo) Marduk's son [139].



Figure 5 The Relief Known as “Garden Party” Found at Ashurbanipal North Palace [53], and Queen Lyre from Ur About (2600-2400 B.C.) [64].

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Seventh day represent death of Marduk, by virtual act imagine the death and its transmission to the sky, and people come out weeping and them clothes, while priest cleaning the statue of the god Marduk and the rest of statues of gods and dressed new look in preparation for tomorrow eighth day happy day (holy resurrection of god) [139].

On the eighth day that most important days and most joy walking priests procession carrying (the miraculous holy water) to the door of the tomb of the god Marduk in the temple in the Tower of Babel or ziggurat. After watering the miraculous holy water by priests his spirit and life back, and appears his statue from the grave to where waiting priests and other gods who receive him and congratulate him on the glorious resurrection from the dead. In the ninth day of the King-led vehicle Mardukh, that made of gold, followed by the rest of the goddess carts. Penetrate the procession street heading to the Euphrates River together with their singers, musicians, dancers and holders flags teams, and after a cruise on the side of the river walking their great procession to the river port to install all the various Babylonian ships sizes and species that take them to the house of celebrations (Akito). On the tenth day, the king offers his hand to the god Marduk hoping with him for the Advancement of him, this ritual was very important constants in the annual (Akito feast), which is an expression and a symbol of recognition and blessing of god Marduk to the legitimacy of king was sentenced to Babylonia for another year. In eleventh day meets all the gods in the Temple of (isakila) to provide loyalty again to Marduk on occasion of his victory and for organizing the universe, and to renew the promise that they gave him in the eighth day and determination human and Babylon city affairs. In the twelfth day offering public lavish banquets in the city for each one in the city, and held noisy celebrations on the sounds of music, song and dance and giving famous Babylonian wines [139].

Tribe/ Relation/ Politician

There was no tribalism in Mesopotamia period because of the nature of rule in that period that divided the control of rule to gods, king, and priests. Therefore, we cannot find any details about tribe. All people must to obey and obligate the rule that written by king according to gods recommendation, as shown in great king Hammurabi code.

3.1.2 Built Environment, Urban Layout, and Houses/ Palaces

Houses is important need for human to settlement, and it is basic significant to forming cities. In Mesopotamia houses different in materials, size, and situations, according to owners social position, occupation, family members. There is no equality, there is big house with many numbers of rooms, there is one story and two stories, there is reed, mud, baked mud houses, it is clearly represent caste social structure.

Size of The lot of The Houses

The houses land is depend upon the owner and his wealthy, the biggest land at first to temple and little less for king palace, the large land for the riches people for big house and garden and sometimes addition land for them animals. The middle class take what appropriate to them house, while poor's small land and usually with common walls between neighbors [186].

Organizations of the House and Urban Design Layout

According to the social classes the city had been designed, in center of city was the temple (Ziggurate) and palace of king, and nearest these buildings the wealthiest dwellings that built by baked mud brick were established, while the poor dwellings were built outside the fence of city by using reeds and papyrus, see fig (6) [166].

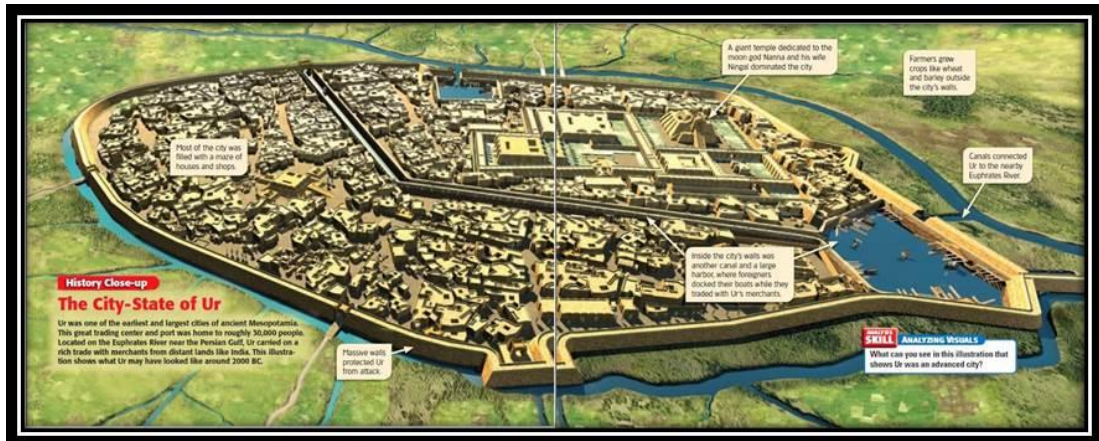


Figure 6 Mesopotamia/ Ur City Urban Planning [186].

Materials of Houses

The materials that were used in Mesopotamia depended on the class of owner, so we can classify the materials as two kinds. First of all, poor people who are in lower class that consist slaves, laborers, and farmers, the material are, reeds, papyrus. The other classes start from merchants, and teachers, crafts, soldiers, government officers, and king, the material are baking mud and imported wood or local palm trunk. In addition, in king's palace there is glazed decoration, with gypsum. As well as they used lime to pave the ground of baths.

Farmers/ Poor Houses

Thicket, wide riverbed or "marsh" what is called, Dreamer magical world of confounding between fact and fantasy. Rarely who read about. Gatherings of people are scarce amid greenery and papyrus reeds and tulips relaxed on the surfaces of water, (see fig. 7). In this place of purity was the secret of life, the beauty of environment impact deeper in the soul. Here's hoping the Sumerians, and have made the finest product of human thought.



Figure 7 Farmers and Poor Houses in South of Iraq, (Chibayish) [165], [38].

This kind of houses are still used in the south of Iraq (Marshes) and in the same materials and shape, and now it is a candidate to join the World Heritage List to UNESCO, [123] because of the similarity between these houses and that in Sumerian period, (see fig. 8), this lifestyle has not changed from Sumerian period till today, that because of the same place and same physical environment, this is give us an approve that lifestyle continues for thousands years, if place identity continues and physical environment not change, that means sustainable architecture identity.



Figure 8 Reed and Papyrus House in Iraqi Marshes, 2012 [124], and Same Hose on Seal from Uruk Period, about (2500 B.C.) [137].

The materials consist of reed, papyrus and mud, these three elements are the elements to build the house in Marshes, and the concept of houses is structural vaults type and covered with same elements. The reed plant material is impermeable to moisture and water, twist Anchors pliant to be twisted As well as a solid textures due to the presence of arthritis occasional internal earned hardness and erection. And that is the best kind of reed-type (Alqubarh) and there are areas known to whom professional of building houses, And a bundle of reeds that can bear the weight of the average tension of construction and construction pedantry here employs the reed as a main element for building, and constructs the structure of columns or (masts) that

make the backbone, by collecting group reeds, called the (Shabah-) and total (Shbab), its diameter is between (25-50 cm) (See fig. 9). Its function is to transfer vertical loads weights.

The horizontal loads are transferred by Hutterers that work as beams, (maximum distance between each other (50 cm), (see fig. 9), as well as to connect the columns. Then cover the formative structure covering space formed and deposed it, it used fabric composed of the severity of the reed called in Arabic (Hasserah). It is called local (Albaria) and total (Bariyat). It is the result of the process of weaving and lopping cutting cane to a group of thin rulers, then woven mat after cutting reed into long of its length of the to several rulers. Moreover, its maker is trying to reduce the confined spaces between rulers, this skilled consider a source of pride for those maker. And be used in reed houses and porches as impervious to water. This mat uses as walls and as primary carpet on the ground to prevent the humidity, (see fig. 10), [10].

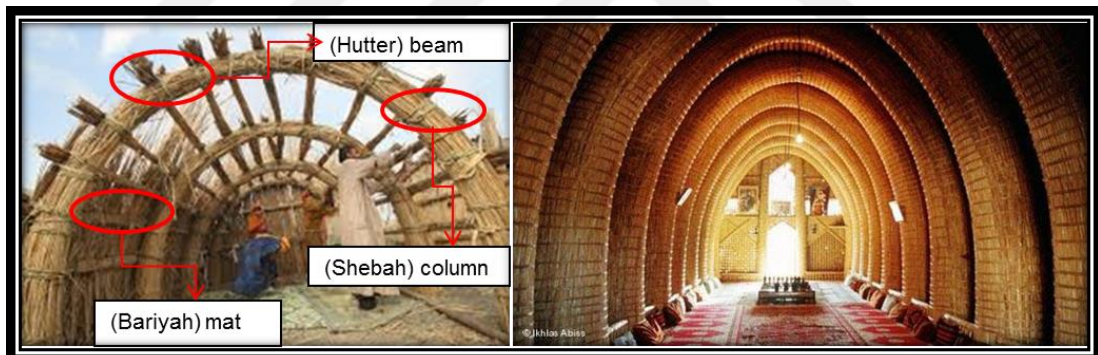


Figure 9 Structures of Reed and Papyrus Houses [2], and Modern Reception (Madhef) with the Same Materials in Iraqi Marshes [1].

Then starts the packing stage or finishing, where the walls are made to fill two openings House lateral dubbed (Kawaser), (see fig. 10) and the door in the opening of the South of (Ssirifa) house where bright sunshine hours of the morning. The works on both sides of the door clip of reeds giving rhombus shape and called (Mushabak) likewise the “shanashyle” in Baghdady House in function, (see fig. 11), [10].



Figure 10 Making Mat from Reed and Papyrus (Hasserah, Bariyah), and Sides Finishing (Kawaser), [113].

Till this time, these heritage kinds of dwellings founded and build, in south of Iraq like in Chibayish district, (see fig. 7). The lifestyle may be similar to slave and farmer lifestyle in ancient Mesopotamia, not in all parts of life but in almost of it. So till now they depend on marshes materials to build their houses but now may be larger especially in the reception parts, and their food is also from marshes, as well as the women and men work together to collect reeds and papyrus as a food for them buffalo, and as main material for them houses, in addition to use its roots as firewood to cooking. Main job is domesticating buffalo and fishing. They use the boats as main transportation means, so they don't have roads in districts, as well as they use them in work. There are space between neighbor and other, there is no fence, separate rooms in each dwelling, each house surrounded by marsh water, no windows in circumferences of room, almost time the rooms forming U shape, this U shape area is used for home work that need outside space such as grill fish, weaving papyrus and reed, etc., the door in this kind of houses represent piece of fabric and sometimes non, the windows small and take interlaced shape (Mushabak) [10], (see fig. 11).

Then coated the structure of the house the whole mats (Bariyah), in three layers, the first new mats above structure with glossy faces to the bottom, the second layer (in between) older mats previously used, which has been saturated with moisture, then the third layer new mats, all these three layers fixed with beams (Hutters) of (Ssirifa) house. The parties of mats in contact with the bottom of land buried with soil to prevent the entry of air and rain inside. Then they are buried interior ground floor

with clean sand and tamping well, then covered by mud and carpeted with mats and then carpeted with rugs and carpets and putting pillows thrown over them and headrests to lean on them. The animals places also structure in same way but in old and uses reed, [10]. According to author's knowledge, the name of the space that use for living is (Serefah), while the space that they use for animals is Zerebah.

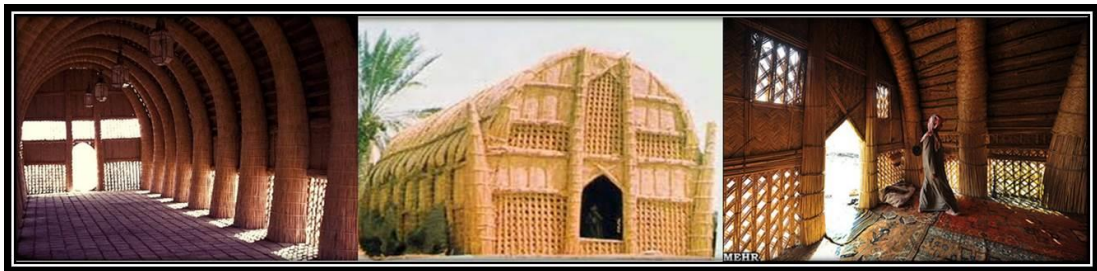


Figure 11 Opening in Reed and Papyrus Houses Windows Called (Mushabak), [57], [40], [110].

The simplicity of materials and simplicity of life formed a society bears a simple customs and traditions of originality, rooted in the era of the Sumerians. It is the marsh, the land of reeds and papyrus. In addition they use the flower of papyrus that they called it (Kherrett), in the food as halvah as a kind of sweets. And if anyone has wound in his skin they put some of the flour of papyrus (Kherrett) as a medicine to stop the blood and help them to heal the wounds, this is a tradition habit inherited from Sumerians, as the Sumerians mentioned the uses of the Papyrus in some mud tablets, [149]. The different between poor and rich houses now depend on size and new technology such as lighting and mates that's not from papyrus.

Transportation Means

“Al-Mash’hoof” is considered the exclusive means for transportation, according to their lifestyle. It is made by local materials, reed and papyrus, and paved from inside with tar. The length of it is about 9 cubits (46-50 cm.) and the width is 2 cubits. Usually it is enough for 4-5 persons. They use long tool of wood or bundle of reed called “Gharafah” to move the “Al-Mash’hoof” through marshes. Its shape is streamlined with long neck in front called “Saidr” and the place where they sitting called “Dosah” the end of it relatively short. The people there keeping their environment, and never harm it, even with modern boats that use fuel to work and it

is more speed, but they prefer the old kind. And they are so boasting with “Al-Mash’hoof” to the extent of naming their children with its name. And it is became proverbial in them lifestyle, so they assimilate persons who keep a secret "so and so like “Al-Mash’hoof” not hear not see”. The interesting her are this means are similar to Sumerian period Mean, [188], (see fig. 12).

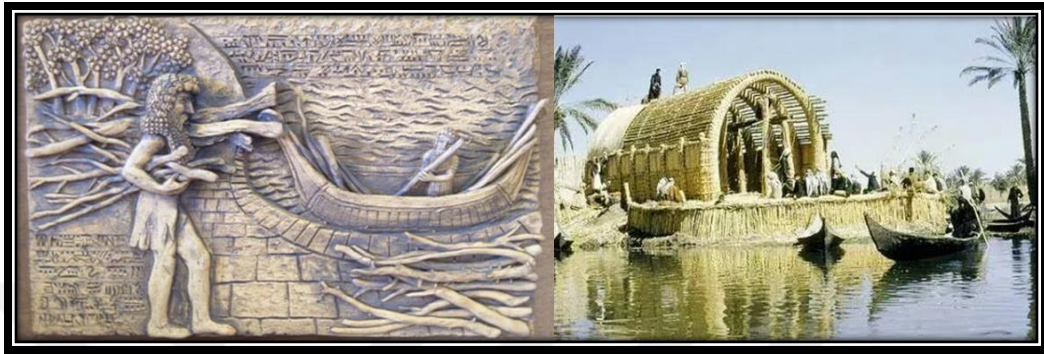


Figure 12 Local Boat Made from Reed and Papyrus from Sumerian Period [98], and Boats from Iraqi Marshes in Modern Day [24].

Public Houses and Palaces

The houses inside city were built by baked brick under sun, it were close to each other, and usually had one wall with neighbors, not ventilated enough, almost all of them with no window, many of its consist two floors, the ground floor used to protect them from the weather and the first floor without roof, that they use it for sleep in hot nights and for cooking. The wealthy houses consists several rooms, and the house shaped as (U) shape, with a garden in center, because of damp, not good ventilation, and dark inside they use the garden in almost time, the dimensions approximately were (12 feet by 10 feet) witch its equal (3.650 m X 3.048 m), [137], (see, fig. 13),

On the other hand, there was an important building in the center of city it is the palace of king, the palace differs from the public houses in size, span dimensions, fence, capacity and height, while it is similar to public houses in materials just in little ornamentation and decoration in parts of interior walls. The function of palace changes, because after the rule of Temple, the palace became the headquarters. The leader move from temple to palace, and the palace became has all function of temple except worship plus other new functions. The new function of palace contained, consider secular monument, royal residence compound of a king, military leaders,

crafts, repair and produce weapons, storage function, and part of palace as school for learning writing, astronomy, and mathematic before establish schools. There is a court and rooms to record the activities as archive contained tablet. In addition the palace became response for distribute the lands to farmers and regulate the irrigation. The palace became the great power, [65].

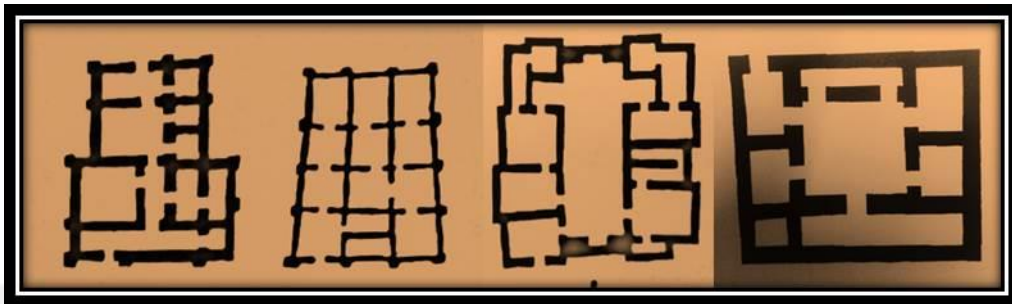


Figure 13 Earliar Public Houses in Mesopotamia, Sumer, and Babylon, [137].

The Palace of KishIII density, which was founded by king Kug-Bau who built the palace (4500-200) B.C. archeologists think that it's built at (3100 B.C.).



Figure 14 Kish Palace Plan In Sumer Period, And The Ruin Of Entrance Steps Of The Palace, [65].

The palace is rectangular in shape (74.6x41 m) (See fig. 14). Palace has been almost entirely swept away by weathering. The steps are eight in number. The width of each tread is 31 cm and the height 15 cm (See fig 14). The total rise from the level of the pavement to the top step is 1.28 m and the width of the stairway 2.35 cm, spacious entrance (34) (3.10 m wide), leads into a vestibule (33) of the same width, from which doorways open into other chambers and passages to east and west. The entrance orientation about (57 degree) to south west, surrounded by defensive fences (3 m), the fence has supported by square towers (2.5x2.5 m),The corridor between palace and fence is (2.30m) without any entrance to rooms from corridor. The great

interior courtyard (6) measures (14.50 m) from north to south and (15 m) from east to west, semi-circular buttress projecting from the north wall of the court. This was constructed of bricks, on the eastern side of the court, part of a later column of mud brick still stands, measuring (70 cm) in diameter and constructed of bricks. The ground is covered with brick plus bitumen and with thickness of brick (21 cm.). Room (15) contained fireplace for making food, or for making weapons because copper ingots were found. Room (30) had several interesting features, at the western end three large potteries jar were found, of very coarse paste and imperfectly baked, which were coated with bitumen both inside and out. They were bowl-shaped with flat, thick rims, and were strengthened at intervals by a slight projecting ribbing which was roughly ornamented with notches made with the finger. Room (31) possessed many interesting features, they were found disturbed by intrusive burials and kilns, plus curious platform, (3.60 m long by 3.20 m wide), was found in the northwest corner of the chamber. Were found to the north of chamber (35) and that close by were found pieces of mother-of-pearl inlay and Stone, such as lapis lazuli and carnelian, limestone, crystal, agate, onyx, red jasper, porphyry, etc. Chamber (42) is Portico length (19.60 m), width (3.10 m), columns (1 m) diameter, [65], (see fig. 15).



Figure 15 Colimns and Portico Ruins, in Kish Palace, Sumer, Mesopotamia, [65].

Decoration

Houses were not expressing pride as they were expressing the need, in addition, less of materials in the land. These two reasons led to limited decoration in houses, while we observe some decorations and ornamentations in palaces, such as, relief tablet, pottery (see fig. 16). Stucco and bitumen for decoration and as waterproof plus

wainscot, fantasy sculpture statues, and animal's statues (see fig. 18), glazed brick, and way of building brick in different directions, [65], (see fig. 17).

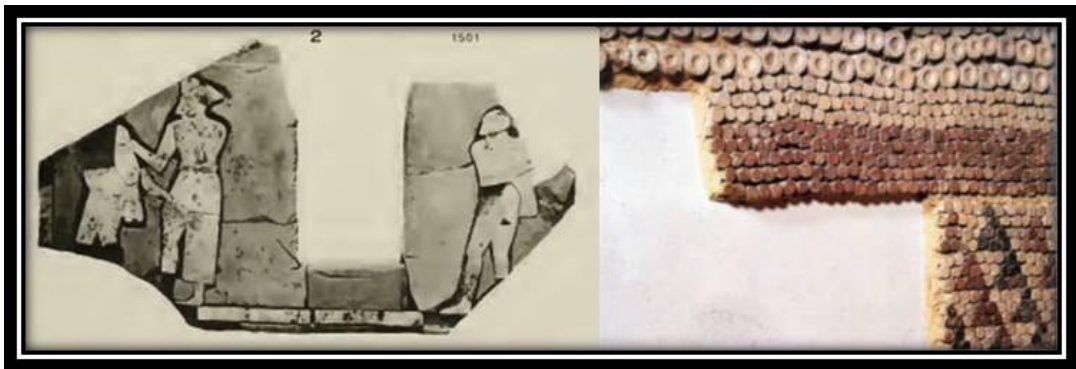


Figure 16 Relief Sculpture [65], and Pottery Decoration [65], in Kish Palace, Sumer, Mesopotamia.



Figure 17 Glazed Brick (Ishtar Gate) [59] , Glazed Brick in Kish Palace Hall Covered Wall And Columns [65], and Backed Brick Built in Decorative Way, [65].

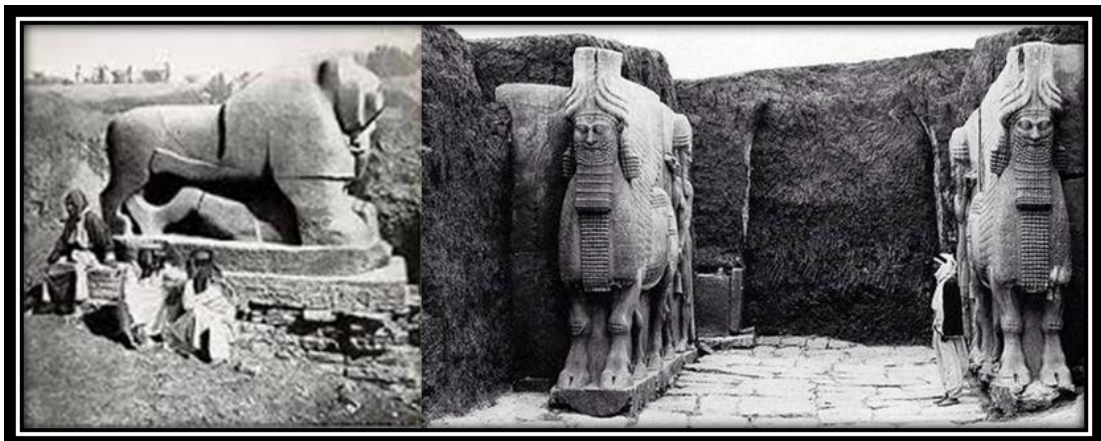


Figure 18 Babylon Lion as Animals Statues, Babylon City, [154] and Winged Bull, Assyrians Palace, As Fantasy Sculpture Statues, [154].

Environment

Mesopotamia is the broad, flat alluvial plain between the two-river Euphrates and Tigris. Geographically the land of Mesopotamia was flat alluvial plain, very fertile and arable, and located between two rivers. The climate of Mesopotamia was hot and semiarid in summer, moist and rainy in winter (less than 10 inches), [88]. There is difference in temperature between day and night.

The rain and snow in the north increase the level of water in the Two Rivers, so the land was exposed to floods, the Mesopotamia farmers established great irrigation system to control the floods and save their houses and agricultural land, in addition they use the alluvium that come with flood to increase the productivity of land. This region is good for growing crops, so there were many farming villages in southern Mesopotamia during (4000 B.C), [78]. So in general the geographic Conditions are, Little rainfall, Hot and dry climate, painful flooding of the rivers in spring, windstorms leaving muddy river valleys in winter, arid soil containing little minerals, and no stone or trees resources.

Houses Analysis

The houses are designed according to needs of the owners not according to wishes, and in that period it was considered as the first step to move from wild or under open sky to settlement in houses. According to nature of human that love to be in touch with outside, so houses represent shelter from exterior environment not more, so the details refer to beauty are so simple and limited to palaces. After that when lifestyle little development in responsibilities and ideology concept change about temple and gods, the palace is planned to represent these few responsibilities of modern city concept, in addition to other factors. The palace consists of places for graves, big hall to receive visitors public/upper class people, admin, court, houses for king and his family, workshops, school, store, etc. the palace is to serve people as a headquarters. As a result, we can conclude the simple lifestyle and simple responsibilities affected the design of houses and palaces in this period to be simple and according to their needs. And the courtyard is hallmark for their houses and palaces. As well as the palace is the place for work in addition to temple, so there is no shops with houses,

palace and temple contained almost shopenwork. Moreover, material is local and no difference between classes in uses materials, the different just in size and dimensions. Furthermore, the religion has no effect on house design. Finally, while the research moves to other period can imagine how lifestyle developed dose it change from simple to complex or not, in spite of the religion in next period ordered its followings to be ascetics.

Next period is Abbassid era, in this period will analyze similar lifestyle aspects and built environment to determine the similarity and differences with other periods.



3.2 Earlier Islamic Empire Period (750 A.D. - 1258 A.D.)

After defeat of Second Empire Babylon in 612–539 B.C., by Seleucids that came from Macedonia, in 321–141 B.C., ruins of the great civilizations started to disappear. After this occupation, Persians occupied Iraq, for long times (141 B.C-337 A.D.), in three different occupations consecutively, (Alakhmignon, Alfrtheon, and Sassanid's). Persians occupation continued till Muslims conquests in the orthodox caliph's period, specifically in Caliph Omar, second orthodox caliph. Muslim's Army defeated Persians in Al-qadysiyah battle, in 636 A.D, in Al-Mada'en City (Taysafun in Persian period), [168]. After this battle Iraq became under the Islam Empire control. The capital of Islam from Mohammed (PUH) period, till third Caliph Othman, is (Medena), in Saudi Arabia, the last orthodox caliph Imam Ali moved the capital of Islam from Medena to Kufa, one of Muslim's City in Iraq, in Holly Karbala, today. After orthodox caliph's era, Umayyad established new capital for Islam Empire in Syria (Damascus). After that Abbasside defeated Umayyad and move again to Iraq to establish great city in history as a capital for Islam Empire, Baghdad is the city of peace, and city of sciences. Baghdad and Samarra' in these cities research will study lifestyle, and architectural identity in following papers [169].



Figure 19 Abbaside State Borders, [27].

The boards of Abassid state or Islamic empire (750-1258 A.D.), from the east, India, some of China, and Persian's Sea. From the west its borders are kingdom of Romanians, Black Sea, Russia, and Bulgaria. From the north its borders are, Bilad Al-Sarar, Bilad Al-Khazer, and Beoreneh Mountains in Europe. From the south its borders are, Persian's Sea and Egypt, (See fig. 19). Baghdad at the beginning is the capital of Islam empire instead of Damascus in Umayyad period, And later Samar'a as well became the capital of Islam Empire, more and more developed in all life fields happen in this time, new lifestyle, because of marriage more cultures, sciences as well developed, construction became important, with new concepts. New thoughts in all life fields. That what this following papers will explain [169].

3.2.1 Lifestyle During Period (750 – 1258 A.D.)

Social Structure

After the occupation of Babylon by Persians, Iraq remained under colonialism by Saljukians', and Sassanians, and suffered from situation of poverty, underdevelopment, ignorance and illiteracy, injustice and persecution, diseases, and conflicts, in addition to all colonialism aspects. When Babylon occupied, massive civilization had been destroyed, it is occupied to first civilization leads the old world, and taught human the mean of writing to record history.

Islam comes when Prophet Mohammed (peace upon him) was sent to all humanity. It is the beginning to establish one of greatest civilization in history what is called Islam Civilization. Prophet Mohammed (peace upon him) and his companions (the fourth orthodox caliphs) rule Muslims about 53 years characterized by justice and equality, indulgence, altruism, pardon, trust and honesty, etc. from nobility of character, and he ordered Muslims to leave lying, treason, breach of trust, cheating, rancor, hatred, etc. from bad manners, and he put simple basic to Muslim, when he says in Hadith Sharif "Muslim who people being free and in peace from his hand and tongue", [91], and says "Smiling at your brother is charity/alms [91]. This period embodied Islam thinking in right way, especially Hadith Sharif "All of you are equal like comb teeth, there are no differences between Arabs and non-Arabs only in piety.

So there were no classes in people, this reason lead to equality in life level even in houses that were built by mad brick and roofing by palms branches. Umayyad period is between 661-750 A.D. This period is characterized by moving away from Islam instructions, and caliphs were madly in love with impudence and wine so, they are infatuated with ladies, poets, odalisques, and boys as catamite, except one of them called Omar bin Abdul-Aziz, Abbassid period from 750 to 1258 take the same way of them predecessors [175].

The population consisted of three kinds, Arabs, Turks, and Persians. Turks liked soldiering and horsemanship and they brought soldiers from their country to strengthen their influence in rule. Persians liked offices, they have extraordinary ability to organize and administration, caliphs were influenced by them and they took from them manifestation of pomp, greatness, and luxury. Important thing that caliphs are influenced by both Turks and Persians, so they loved to live in massive and ornamented palaces, it is contrary to Islam's teachings, because all these palaces built from Muslims treasury. The caliphs quoted their dress and eating utensils and musical revival councils and boards of drinking. Caliphs were from Arabs, and some of them were powerful and wise, so they built the glory of state and its prestige, the common people interested with translation because of its important of culture mixing, while other common people kept almost of them tribal habits and fanatic to them race, [175].

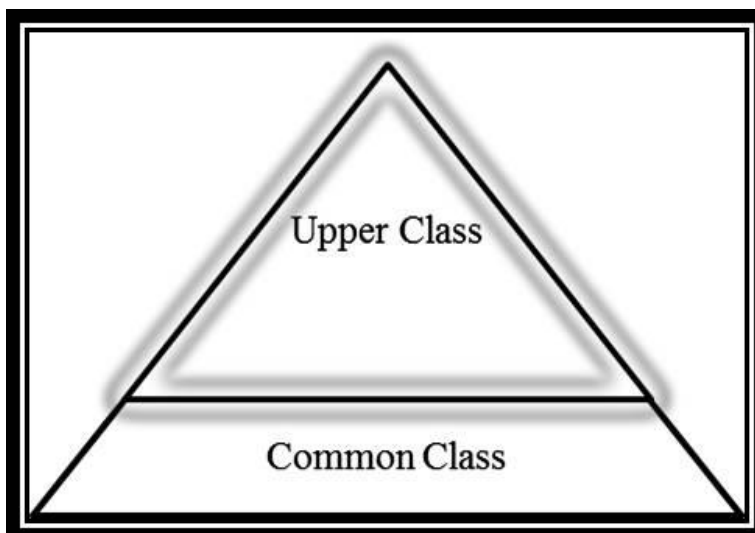


Figure 20 Social Classes In Abbasside Period, (Researcher).

The social structure consisted of two classes (See fig. 20), first one upper class, included caliphs, princes, collaterals, odalisques, ministers, army leaders, singers, and poets, lived in or near caliphs palace in massive palaces, lived in luxury, dressed best clothes, ate grand foods. They were influential and sway, they resort to confiscation the common people funds for compensation shortage in them wasting for women, wine, poets, etc. them palaces were rife with foods, odalisques, singers and poets.

This kind of lifestyle affected their palaces to be massive, contained a lot of rooms for women, contained huge halls for celebrations, ornamented to represent luxury manifestation and lavish expenditure. The second one is common class that consist, farmers, crafts, and who work for his daily food, they were drudge for upper class, them houses and furniture and food was very simple, and them money were confiscate between time to time by caliphs privates people, so in that period it became widespread to hiding money underground, and bear insult and torture in order to don't give them money, [14]. In a result the indulgence in Islam call to peaceful life with all religions, that encourage to mixing Arab culture with other nationalism and sects, which lead to mixture of arts and crafts that develop and prepare to new movement art called Islam Arts, that been clear in palaces.

Family Structure

There were two kinds of families in Abbassid period. First one for common people class consist of father, mother, sons, aunts, uncles, these kind of family lived together because they cooperated to get their food such as farmers, crafts, and sometimes contain father, mother and sons specially for crafts. The second one is for upper class this kind of families is very large and ramified, that consists of wives, odalisques, services, cooks, wine boys, catamites, and guards. Odalisques take important part in palaces and almost of them became mothers to caliphs, the situation of odalisques depend on her beauty, eloquence, and her ancestors, because there are differences between caliphs about preference and choice among, white slaves that imported from (Turkey, Slavs, Daylam, and Kurds), black slaves that imported from (eastern Africa coast like negro), and Greek slaves that captive in wars with Byzantine. Historian

mentioned that number of odalisques rise to thousands in caliph's palaces, in addition odalisques when she became mother for a caliph moving from slaves class and build for her personal palace and must have more maids, [175].

Family Members Duties and Working

In spite of aspects of impudence that found in caliph's palaces, on the other hand, there were common people and scientists who clinging with their heritage habits and Muslims manners, that both of these consider from nobility of characters that Arab liked it, they refused and disapprove what contradict with them originality, so mosques and teaching circles several sciences remain, and teaching spread till Baghdad became center of attraction for world especially for student, culture mixed, a lot of books translated from Arabic to other languages, and vice versa, the libraries filled with books that contained more and more sciences especially in religion, medicine, astronomy, mathematics, philosophy, geometry, geography, etc. that era called golden era of Baghdad, especially when Al-Mustansiriya school has been established as a university.

Abbasid caliph's were infatuated with odalisques, for each one there was an army of them and rise to hundreds or thousands, struts in pompous clothing and blazers, exaggerating their elegance, and embellishment, vie in sarcenet and brocade clothes, swagger in jewelry and pearls as crowns, earrings, anklets, and necklaces. So Al-Rashid caliph was infatuated with Arabians odalisques, and Al-Amin caliph was infatuated with Christian odalisques, while Al-Mu'tassim caliph was infatuated with catamites and Turks odalisques, and this reason make him to move caliphate position from Baghdad to Samarra 'a because people in that period refused this kind of perversion and became resent of this behavior that conflict with them religion and heritage manners, [14]. Arab Muslims were famous with trade they use camel as a means to carry them goods for long distances cross southern to northern desert. And they spread this transportation technology. Camel caravans were the method of travel during Abbasid period and for trade. Agriculture is other important job in that time. Huge land that caliph ruled was arable and all the land taxes were sending to treasury, that caliph's were the only person know howmany inside it.

Manners

“Worship Allah and do not associate anything with Him. Be kind to parents and near kinsmen, to the orphans and to the needy, to your neighbor who is your kindred, and to the neighbor at your far side, and the companion at your side, and to the destitute traveler, and to that which your right hands owns. Allah does not love he who is proud and struts (36)” [94].

Verse of holy Qur’an above order Muslims to take care of people and it starts with parents and ends with right hand owners (slaves), this is from manner Muslim’s, and Prophet Mohammed taught Muslim to give food and clothes to slaves from what Muslim eat and dress, in addition let them sleep in the same furniture, and don’t harm them by hand or speech, and giving freedom to slaves it is from charity [5]. As a result, the houses must contain several rooms especially to whom that has odalisques, and slaves, in addition the houses must contain large hall to whom that use them odalisques for dance and singing and verses. To get clear idea about the manners how it were developed, the historian told us about the musician Ziryab (789-857 A.D.), who lived in Baghdad and then emigrate from it to Andalusia, he became the arbiter of fine taste in 9th-century, from where he set the standards for dress, protocol, table manners, etiquette, and even the coiffures of men and women [176].

Religion

Muslims in Umayyad period were divided into two teams, first group followed Umayyad that take caliphate by force people to Pledge of allegiance, this team called by historians “Sunni”. And the second team whom refused to homage Umayyad because of lack of eligibility of caliphate, called by historians “Shiites” (term mean following to Ali bin Abi Talib, who is cousin of Prophet Mohammed, (PUH), and husband of his daughter Fattimah). According to Hadith Sharif “whoever takes me as a master, Ali is his master” [30], disagreement between two team is that first team (Umayyad) think that they deserve caliphate in spite of it comes by force, and second team believe that prophet Mohammed determine in last pilgrimage to Mecca that Imam Ali will be my successor.

Sunni team lived in Levant (Bilad Al-Sham) today is (Syria, Lebanon, Palestine, and Jordan), while almost Shiites lived in Iraq, Abbasside who are cousin of Prophet Mohammed (PUH) claim for caliphate and motivate people to revolte against Umayyad and they are worthier with caliphate, in spite of they were like Umayyad in going away from Islam principles, [175].

Caliphate did not care about Muslim's affairs and Islam principles. They lived in upper lifestyle, and exploited everything to realize their wishes and securing pleasant life. In addition, they followed and killed who stand against their policy from clerics, even if he was from them relationship. This policy lead to divided people for two parts, one represent the government and work with them and carry same concept, that lived in and around caliph palace, second part who remain clinging with Islam principles, these class interest with schools and teaching, crafts, and farming. Those have simple houses and away from caliph palace, because of these conditions start Sufism movement to arise, that is call to privacy and just for worshipping God and prey that mean left life in this world and left marriage, and eating little that mean exaggeration in worship and asceticism, they lived in special houses called hermitage, [108].

Persians were unbeliever, and atheists. And they affected caliphs in impudence, because almost all of them did not follow Islam, while their religion was; Zoroastrianism, [133], Manichaeism and Magianism, [87], as well as the Judaism and Christian, because Prophet Mohammed (PUH), order Muslim's to not harm free non-Muslims according to Holly Qur'an (there is no compulsion in religion), [94].

As a result, the religion influenced the lifestyle in Abbasside period. Islam lead to pear who clinging with its principles, and who remain away from other aspects. Poorness and asceticism make people lives in simple houses, while other religious that have other concepts about life such as Magi, that affect Abbasside state make them live in another kind of houses that represent luxury, pomp, and lavish expenditure.

Cooking and Food

When civilization became in culminate, everything in life details became according to rules and systems. In addition, people in lower class needed to learn it, in order to convoy the civilization and be civilized. Food and the ways that was prepared in Abbassid period became one of important things in state structure, in addition the ways of cleaning cooking pots, from where the significant of food it mentioned in literature such as verse, and history. As well as they learned the culture of sitting, eating and talking through eating and drinking, that what they called it drinking companion. One of the important writers in that period is (Ibin Kashajim), who wrote about kinds of food and table morals. The other one is so famous (Ibin Syar Al-Warraq 4th AH.), (Kitab Al-Tabikh) who was the supervisor of caliph's kitchens, in this illustrated book by picture that there is a real copy of it in National Library of Finland, and Nawal Nasarallah translated it to English language, [148], (See fig. 21).



Figure 21 Al-Manssor Food Table [82], and Two Original Pages of Ibin Sayar Al-Waraq Book [148].

In this book, there are recipes for hundreds of cooks, and recipes for the dessert and drinks. The recipes devoted for fasting even according to the Christian religion, and foods appropriate for patients, in addition there are offers and advises for the right kinds of foods for each season of the year, as well as the benefits of the food habits for healthy sleep and successful sex life. The book devotes a section to table manners, and kitchen tools appropriate for each type, and tips to get rid of food odors after the cook, to clean the teeth after meals, health benefits of each type of food, and their impact on health, and he emphasizes the strict criteria for cleanliness, [82]. This book give us an idea about the kitchen in palaces and its equipment's, as well as give as an explanation about the development lifestyle.

Visiting (Daily, Weekly, Monthly)

The development in Abbassid period influenced all part of lifestyle. The economic situation is one of important factor, that effect on relationship between peoples. Gifts, food tables, and evening performance such as for dancing, verse, and so on. These kinds of meeting were usually holding in houses, palaces and bazars, so visiting were so common in this period especially between men.

There was a Bazaar called slave trader bazar in Baghdad, just to sell slaves. The trader takes who beautiful and eloquent and learn her verse, diversity of telling stories, music and singing to sell here in large amount, and they open houses called (Dar Al-Qiyan) what is mean odalisques house, to sing, tell stories in diversity and dance, for guys, it is something like club. These houses were spread in Baghdad districts especially in Haron Al-Rashed Caliph, in addition odalisques learned how to speech in literature way and they were compete with poets as well as this kind of meting called (Majalis Alghina'a/Tarab) what is mean singing/joy council, [5].

Sleeping and Sitting

The development and flourishing of circular Baghdad in golden era, as well as the connection and trading with other cultures, made life more luxurious and almost precious and valuable things were brought to Baghdad by trade or as gifts especially to caliph. The trade with other countries, especially with India and China, imported valuable clothes for beds and wearing, poet laureate mention the clothes of caliph and his sons, wives, and odalisques, were so precious and usually from silk and embroidered with gold threads. The crafts developed by mixed with other culture. The art of woodwork became more modern almost furniture was made from wood, such as beds, clothes boxes, chairs, benches, and caliph throne. They use silk and cotton for making bed equipment, the industry became more important, so Al-Manssor caliph when he planned Baghdad he divided the first circle after the exterior fence as industrial area and he named each street with its crafts, so there was pottery street, carpenter street, blacksmith street, clothes street, etc. Abbasside use wood as

main element to make them furniture, especially the imported kind for rich families, while the public use palm branches to make them furniture and who poor sleep and sitting on the ground.

Studying and Education

Al-Mustansiriya School, (see fig. 22) is one of oldest schools in the world, it was so famous, it became center of attraction for students, from all regions. Baghdad was abundant with its libraries and bookstores. The teaching was not limited to religions, but also in literature, astronomy, mathematics, medicine, and other sciences, more and more sciences translated from Arabic to other languages and conversely. This mixed of civilizations develop lifestyle, and develop all parts in that period.

The studying and education did not stop in reading and writing, poets, religious teaching and other sciences. The art of music and singing as well developed. Ziryab (Iraqi musician) opened institute of music in Andalusia (206-238 Hijri). And he was the dean of the institute and his sons, daughters, wives, odalisques were the teachers. And he had the ability to manufacture musical instrument, the institute learned, singing, melodizing, verse, dance, and playing on a musical instrument, and historian mentioned that almost women learned dance in them houses when he send to them teacher from his institute, as a kind of modesty, [5]. The Arab learned from soldiers that captured in battle the way of making paper, that is became the main means to separate literature and knowledge. Dar Al-Hikmah and Al-Mustansiriya School are the famous institutes that concerned with teaching and education. Thousands of books in these schools, because of separation of education in that period, there was especial bazaar for student called, (Souq Al-Warraqien), (souq) is mean bazaar and (Al-Warraqien) mean who deal with paper, in this bazaar were calligraphers, translators, books binders, books sellers, stationery sellers such as paper and inkwell [169].



Figure 22 Al-Mustansiriya School, Baghdad, built in Abbasside Period [141], [3], [3].

Occasions Choices

According to the influence from other civilizations, like Persians, Abbassid learned the modern style, they learned wearing style, eating style, sitting style, and so on, each style are re-formed according to them wishes. Clothes were brocaded with gold and silver, bed clothes were from silk as well as to its brocaded. Almost furniture was in high style especially in palaces. Occasions were represent the luxury lifestyle in high level; food tables were so wealthy with large range of food kinds. Banquets were proverbial between common people. Caliph and his sons, odalisques, and collaterals, were wearing luxury clothes to represent the luxury lifestyle.

Caliph Al-Aziz B-Allah had a house called Dar Alkiswah which means clothes house, and has thirty odalisques just for arrangement, perfuming, and put incense on its, and (Zain Al-Khizan) was the supervisor of them. In addition this house contain all clothes for summer and winter, and there was wardrobe for princes, services, odalisques, and there was place for sewing clothes, turbans and bonnet to, ministers, great persons in palaces, caliph wives and odalisques, princes, and employers, [5].

Tribe/ Relation/ Politician

Power of caliphate role in Abbasside period cancelled all deeming and other loyalties, because each gathering considers against the state, and it will weaken the power of it. In fact it is natural to protect the state, loyalty to tribe according to relation principles or politician make holes between society, and this hole lead to separation and weakness, that weak social structure and state power as a result. In

begging of nineteenth century, the reader will read in this research about the gathering of lifestyle, because of weakness of Ottomans Empire. Cancellation of loyalty to tribe and other consideration such as religion, forming dangerous element work to disassemble the society and state. At the urban planning and housing level, this loyalty produced tribal and religious zoning, and the houses may be dangerous, it may be places for crimes, and this lead to disassemble of society that canceled or at least reduce communication between districts and change all manners and habits, in addition encourage up bad manners and habits.

3.2.2 Built Environment, Urban Layout, and Houses/ Palaces

Almost all Muslims lived in deserts, and they have sheep and camels as a means for living and transportation, even in Mecca they were depend in the same way of living, in addition to trade, Muslim conquests expanded mind of Muslims, especially in Abbasside period. The mixture with the other cultures and cities, expanded them views of building that represent for luxury and power. In addition to the conquests, that historian determined three factors that developed Muslim Empire and economic foundation, long-distance trade, settled agriculture, and urbanization. Economic power that is considering an infrastructure motivates and encourages Caliphs to build massive and unique palaces in empire land.

Size of Lot of the Houses

In circular Baghdad, caliph divided and distributed lot of housed according to the level on society, job, and relationship with caliph. So the palace takes larger share, caliph's son's palaces as well take large lots. The leaders of army, ministers, and judges take as well got large share but less than caliph's son's. The rich people take good share as well as the important persons. While public people got small lot share that just being enough to build house, if compare with the others that theme's houses contain gardens, servant houses, and small/big orchards, [132].

Organization of the Houses and Urban Design Layout

The circular plan of Baghdad, (see fig. 23) was designed and influenced by Sassanian palace [131], researchers think it is maybe influenced by Marri city in Syria on of Assyrian Cities, or by (Firuzabad) city from Sassanian emperore (see fig 23). Abbasside is similar to Umayyad period the palaces separated from Mosque, and they similar to them with the number of palaces.



Figure 23 Master Plans of Circular Baghdad City [132], Circular Marri City [22], and Circular Firuzabad City [159].

Al-Jawsaq Al-Khaqani Palace, Al-Qubah Al-Khadra'a Palace, Balkwarah Palace, Dar Al-Shajarah Palace, Firdawos Palace, Thurayah Palace, Jafari Palace, Taj Palace, Rissfah Palace, Dar Al-Mamlakah Palace, Buruj Palace, Qasir Al-Banat Palace, Al-Ashiq Wal-Mashoq Palace, Ukhaidir, Gold Place, Khuld Palace, Caliphat Palace, and others are all of them Abbasside palaces, [8].

(Al-Qasir Al-Sharqi) Eastern Palace contained 4000 room. It was built by Caliph Al-Mu'aiz Liden-Allah. It was the ruling place, Caliph living, government divans, and weapons divans, in addition it contain many secret corridors. Then caliph Al-Aziz B-Allah built western palace, it was smaller than eastern, these two palaces called bright palaces, and there was space between them called, between the two palaces has capacity for (10000) ten thousands soldiers, [5].

The travelers and historians described Samarra' as well as Baghdad. It was planned according to Caliphs commands, and the lot and houses locations determined by caliph himself. The important thing is that almost all houses in Samarra' were for soldiers that surrounded the caliph palaces from each side. Almost all people in

Samarra' were Turkish from couple categories, first one from middle Asia and second one bought as slaved from Samarqand, and who come from Turkey because they were relative to caliph as they relative to his mother. Almost they were soldiers, and in that period, the movements of non-military were limited, [13].

Public Houses

No ancient monuments were found in Baghdad to represent the public city. All ruins were demolished and rebuilt after the end of Ottoman occupations. While in Samarra' more and more foundations of houses are still standing, there three kind of houses there, first of all small size houses, (see fig. 24), medial size houses, (see fig. 25) and large size houses, (see fig. 26), so some of houses contain more than one courtyard (see fig. 24). The trait of these houses is the courtyard, and almost built by backed brick, they use decorative inside and outside houses on the walls in ornamentation way. The ornamental style in Samarra' developed in remarkable phenomenon way, [72], in history of Islam architecture. Three levels of develop decoration in Samarra'. The second and third one consider as individual style that give distinctive style to whole Muslim art, especially the treatment of arabesque.

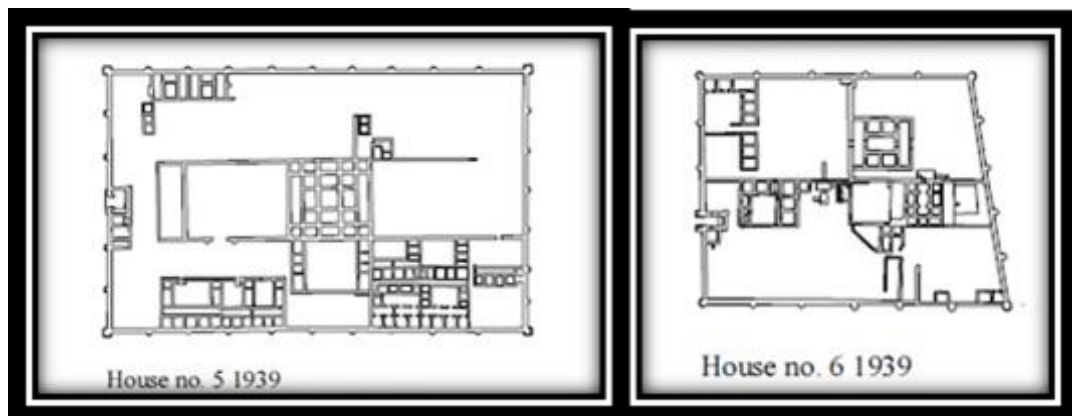


Figure 24 Small Houses In Samarra' [13].

Public houses as shown contain courtyard as trait for all. The materials used to build is backed brick. The loot is different according to owner. The houses located in organic urban planning. The walls are ornamented, especially large houses that refers to rich owner. In some large houses there is niche (mihrab), toward Mecca.

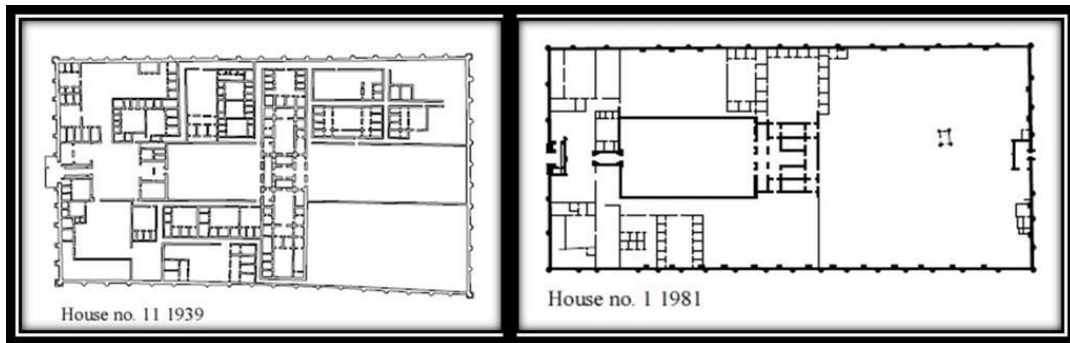


Figure 25 Midial Houses In Samarra' [13].

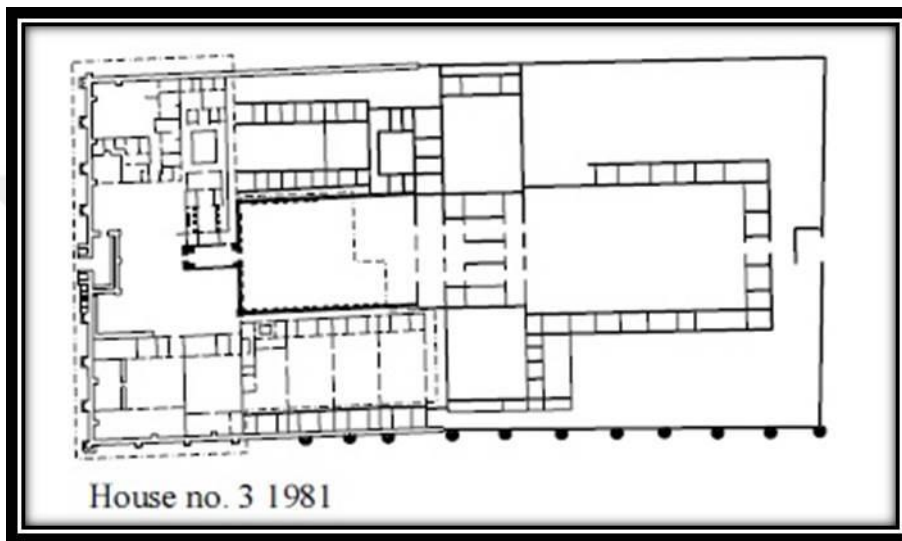


Figure 26 Large houses in Samarra' [13].

Palaces

Abbasid caliphs were so concerned with building palaces. They built many palaces in same region and in different locations, because of the number of caliphs and for their sons, and because of the number of odalisques. Inside city the palaces were for caliphs, as residential, administrative, and for odalisques. Around the main palace were caliph's son's palaces as well as important persons and judges. There are another kind of palaces built and located outside city usually near oases and rivers it used for amusement and hunting.

The palaces represent the power of Islam Empire by its size, massive fences and towers in it, large number of rooms. The palace plan is mostly rectangular shape, consist many courtyards, portico, and arches. The walls were so thickness, and usually more than one meter. Ornamented walls by using blinded arches and using molds for similar decorates in large area.

Abbasside-fashioned style was influenced by Sassanian and Arts of Asia Minor and the former Umayyad art. The influence appeared in using brick (Ager) instead of stone, gypsum ornamented instead of stone ornamented, rectangle plans in almost buildings, using pointed arch plus the circular, watching towers influenced by Sasanian style, multi-gates influence by Mesopotamia style, using abutment instead of columns. And Innovation style floral abstract away from nature (Style of abstraction), like Minber Al-Qayrawan Mosque, plus the spiral Minaret like Malwiya in Samara'a and Ibin Tolon in Egypt, [131].

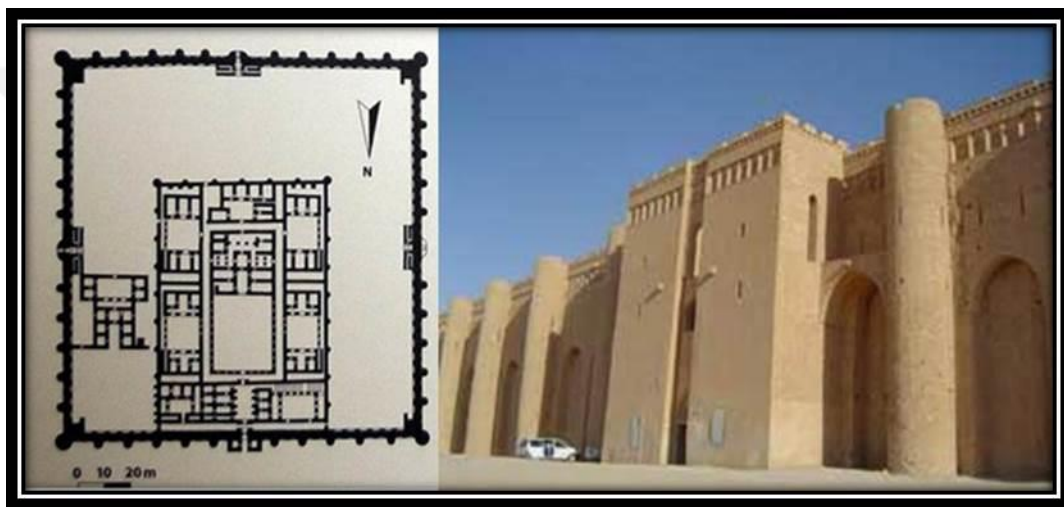


Figure 27 Plan of Ukhaidir Palace [91], and Fence of Ukhaidir Palace [105].

One of Abbassid palaces that is still standing in Iraq is Ukhaidir Palace, in addition to golden palace in Baghdad, Ukhaidir is located in desert about three hours to the south-east of the oasis of (Shethatha), and seven hours' southwest of Holy Kerbela. In general, the length about 176 m., and the width about 146 m. total area is 9000m² contains 165 room in different sizes, large sitting room (Ewan) and reception halls, huge corridor, living rooms, lobby, bathrooms, and mosque, (see fig. 27). There are also four small palace inside it appear as one palace. All of this surrounded by great wall its width is 4.5 m and its height is 21m and it contains 48 towers, (see fig 27). When entered from the north gate, will find corridor in the left side stair with 2m - width historians think it is used to transport the food and the other needs things to guards. In the right side we find king room with bedrooms. The main part in palace is the portico, and the fourth houses for the palace officers. Also there are tunnel leads to out of palace. In the eastern north the king house with big basement (may be for

sleep). The mosque contain big prayers place with (Mihrab) niche (concave in Islamic style). There are 4 well inside the palace in addition to the several canals comes from Euphrates River, [91].

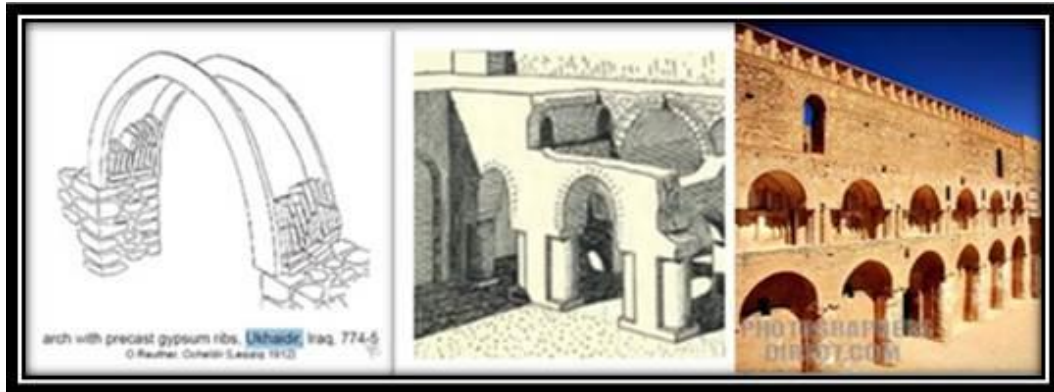


Figure 28 New Style of Arches in Ukhaidir Palace [91], [91], [105].

The arches of the palace are new style by using precast gypsum ribs, [91], (see fig. 28) On the other hand the using abutment instead of columns exactly like abutment in Mosque IbnTolon, three kind of arches sub-circular, pointed, and toothed arch are used in the Palace (see fig. 29).



Figure 29 Sub-Circular arches, Pointed arches [91], and Toothed Arches [105]. in Ukhaidir Palace.

Cilahpat Palace is another palace of Abbasside empire, and it is considered the first palace that built in center of Baghdad, the palace is rectangular shape with courtyard, (21.5 * 20 M), (see fig. 30) surrounded with large number of halls, rooms, and Iwans, the palace is two story building, and contain one main entrance, [4].

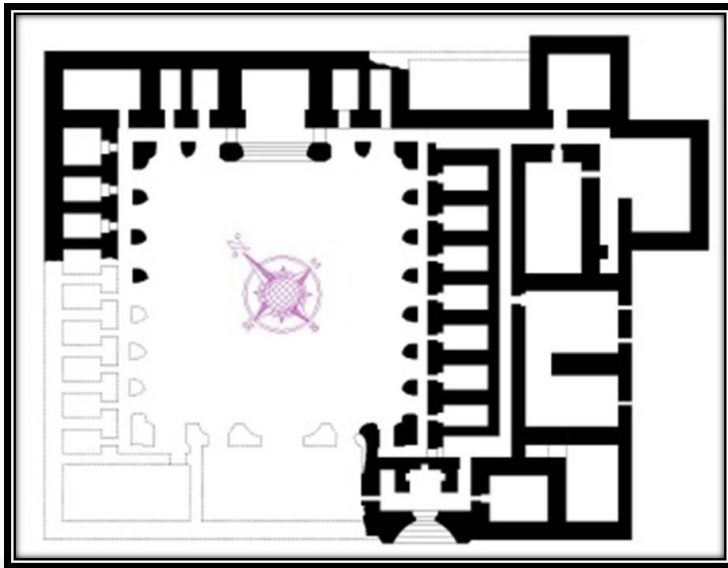


Figure 30 Cilaphat Palace Plan, Baghdad, Abbasside Period, [3].



Figure 31 Corridor Decoration [3], Gate [3], and Entrance Room Decoration [3], In Cilaphat Palace.

The entrance located in southern elevation, the gate contains overlapping pointed arches, and these arches were surrounded with rectangular frame, these arches are so ornamented by using gypsum and brick ways. There is no direct entry, when passes the gate you have to deviate to right or to left in order to give more privacy, this design of entrance are so common in traditional Iraqi architecture. The entrance consist small room and corridor in both sides of room, the ceiling of corridor and small room are decorated by gypsum ornamentation and muqarnas style [116], (See fig. 31).



Figure 32 Courtyard, Rooms in East Facade, and Fountain in Cilaphat Palace, Baghdad [3].

The courtyard is rectangular in shape, with dimensions of 21.5 * 20 m., rooms, and halls in addition, iwans and portico surrounded the courtyard, Iwans are located in north and south facade, (see fig. 33), and it is separate the east facade from the west facade, north iwan dimension is 5 * 8.5 m. while the south iwan dimension is 4.5 * 12.8 [4], and the height of pointed arch of it is 9.7 m., the ornamentation appear from height (3m.) and continue till the ceiling, [116].



Figure 33 North Iwan and Gypsum Decacation on Iwan Ceiling, Cilaphat Palace, Baghdad [3].

The palace contain about 40 rooms and 12 different halls with 7 rooms in the east side, (see fig. 32), with similar rooms number in first floor, and 9 rooms in west side with similar numbers in first floor, in the north side there are two rooms in each side of iwan with similar number of rooms in first floor [116], (see fig. 34).



Figure 34 Portico and North Iwan With the Four Rooms in Each Side, Cilaphat Palace, Baghdad [3].

Porticosurounded the rooms from three sides except the south direction, and in both stories, the portico lean on buttresses or abutment, each abutment (1.15 m.) and span between each one (2m.), portico in each floor are decorated with gypsum ornamentation and muqarnas [4], (see fig. 34).

Decoration, Ornamentation, and Arts

Archeologists and historian believe that ornamentation developed in Samarra'. Creswell (1944) wrote an article explained the development of ornamentation in Samarra' in Islam Empire. She divided this development in three styles, first one (style A) reflects Hellenistic concepts in ornamentation, consist three to five lobed vine-leaves, same style of cutting, while it different in depth varieties, shadows, and more flexibility [72], (see fig. 35)

“Style A: is distinguished by its adherence to Hellenistic motifs. Its decorative elements consist of three and five-lobed vine leaves with bunches of grapes, which each have three lobes; the palmette and the eyes between the lobes can be seen clearly. It is possible to discern the same Hellenism in the style of cutting, in so far as the carving is carefully graded to give variety of depth, deeply shadowed in dentation and strong plasticity” [72].

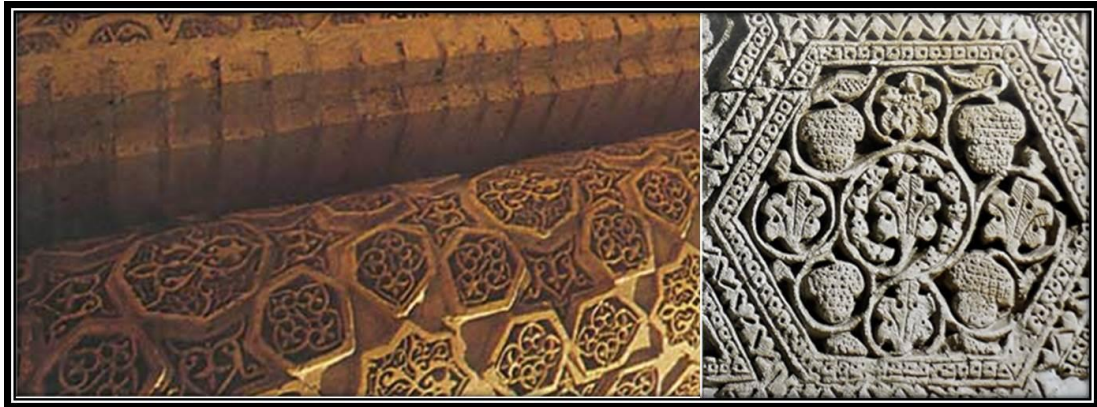


Figure 35 Style A Appear in Details at Gate of Cilaphat Palace [3], and atn One of Samarra' Houses [176].



Figure 36 Style B Appear at House Decoration in Samarra' [176] and at the Niche of Mosque in Baghdad, Built in Abbasside Period [176].

The second style is style B, without wholes, depends on non-meeting vine, narrow ended. Elements of ornamentation developed to be big and separated, flat, and no spaces between, each element complete the other [72], (see fig. 36).

“Style B: the background patterns are diminished until they become merely narrow veins which like the principal elements; these latter nearly lose their connection with each other. Thus the elements developed into big separate units, which are flat and have no stems. Each one completes the other, leaving no space between, so that they fit together like countries, sharing common frontiers. As a result, many interesting shapes were produced” [72].

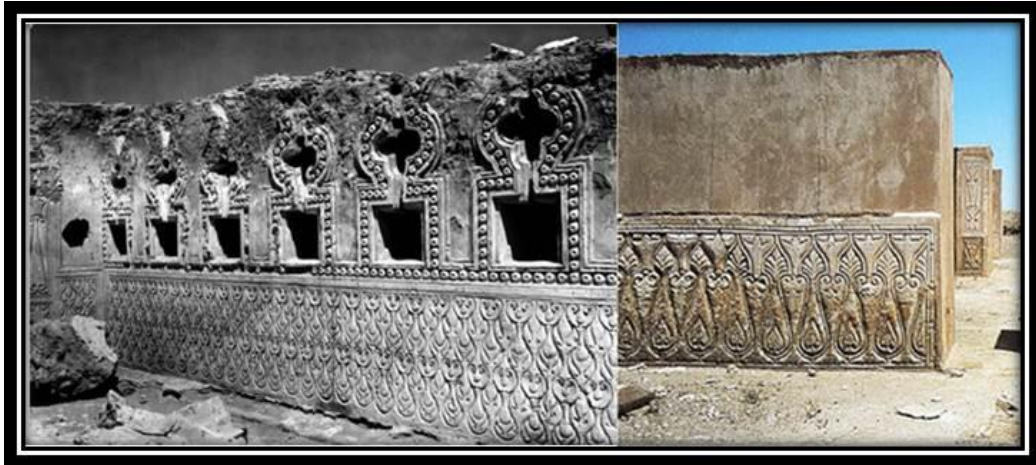


Figure 37 Style C Appear at Walls Ornamentation in Samarra' Houses [176].

The third is style C that is made by using molds, to cast more similar ornamented shapes, (see fig. 37). This style is consider the famous one and developed special style of Muslim ornamentation [72].

“Style C: its patterns, except for a few of the simplest borders, were made with moulds. Prefabricated moulds were used to produce multiple casts of the same design. This was probably the consequence of an increasing need to the more economical in time and money, and was an inevitable-consequence of a continuous increase in the scale of architectural projects” [72].



Figure 38 Brick Decoration Appear at Facade of Cilaphat Palace, and Appear at Portico of Ukhaider Palace [176].

The art of brick building (Alriyazah) is another kind of ornamentation, In Abbassid Palaces, this way of decoration gives more details with brick by using it in different angles. In addition, craving the brick to produce beautiful shapes especially in the gates, (see fig 38). Muqarnas as well as is another kind of decoration especially in palaces, corners of rooms, interior of domes, in mosques, etc. (see fig. 39).

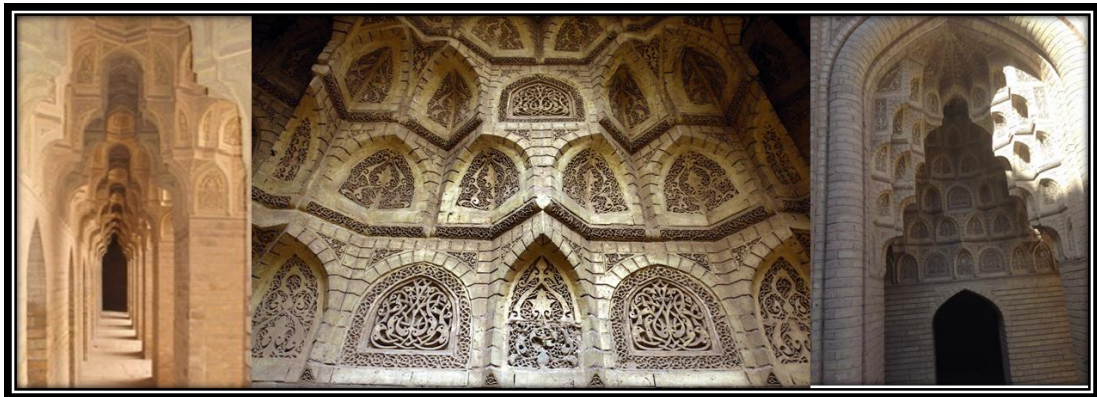


Figure 39 Muqarnas Appear at Portico Arches in Cilaphat Palace, Abbasside Period, In Baghdad [3], [176], [3].

Furthermore, the use of calligraphy and carving art is a way to ornament the parts of walls, niches, and gates. It is considered as a fundamental element (see fig 40). The significant of Arabic calligraphy comes from that Arabic is language of Great Qur'an. The art of script is to write the words in ornament shape, like being as one later, to seem as decorative knot, On the other hand, to give an expression as random writing, or by combined with vegetal scrolls.



Figure 40 Calligraphy Craving Art Appear at Upper of Niche of Mosque in Baghdad, Abbasside Period [176], And Diiferent Types Of Arabic Calligraphy That Using In Calligraphy Craving Art In Abbasside Period [176].

Moreover, the painting is other kind of decoration in Abbasside period, usually it is used for roofs and walls decoration (see fig 41), in spite of it is less appeared in Abbasside period, but they used it at least in amusement palaces like Umayyad style because of development according to mixed them culture with other cultures [90], and this is one of Umayyad style that effected Abbasside style, especially if looking

to Amra Palace interior painting, (see fig. 41), time (705-715 A.D, Built by Caliph Al-Waled bin Abdul-Malik), in Umayyad period.



Figure 41 Women Dancing, Wall Painting (Fresco) at Harem, Dar Al-Khilafa, From Abbasside Period, In Samarra' [176], and Ceiling with Wall Painting, (Fresco) at Amra Palace, From Umayyad Period, in Jordan [84].

Eva (2010), thinks that the painting comes from the influence of “Sassanian, and Greco- Roman” on Umayyad culture, and Muslim tried to adaptation with this concepts of painting, so Muslims’ artist paint, women dancing musician, and hunting journey [84].

“They decorated their rooms with pictures taken from late-antique traditions, such as hunting and other scenes of royal pastimes and depicted female dancers and musicians, which at the same time indicate a continuity of norms Muslim society had inherited from preceding Mediterranean civilizations. To judge by written descriptions, they also reflect common ideas about women and similar concepts of ideal female beauty.” [84].

Author thinks that painting figures, in Islam Architecture is so limited, and they can say it is not famous, and it represents person’s wishes, and never represent Islamic Architecture, because of it is not found in all palaces, that is first reason, secondly, this kind of painting not represent all Islam, especially the both Abbasside and Umayyad caliphs who use painting, they use it in palaces that located faraway from center of capital, and they use it in private palaces that use for amusement. So it represents persons and not represents Islamic Civilization. Finally, this kind of naked women painting especially that appear in Amra Palace, it is incompatible to all religion instructions not only to Islam.

Houses and Palaces Analysis

Abbaside palaces are usually, built in defensive style, and it almost consisted of, massive fences with sub-circular buttresses towers. Palaces usually consist of large numbers of rooms and halls, and that according to palace function, such as, throne hall, reception, women rooms, kitchens, bathrooms, and basement. The immoderation of using decoration in both interior and exterior walls and ceilings is to represent beauty, luxury, splendor and greatness, in the other hand we can see that using decoration not limited to palaces, but it is were famous in public houses as well, as kind of luxury lifestyle. Plans are not in direction to Mecca, because mosque is not based in palace. From hoses and palaces plans receiver observe, the concept of design is the courtyard, and all functions located around it. The materials that were used in both houses and palaces are brick as local material. From standing palaces, it is clear that never windows were founded, and this is and climate solution, and they putting small open without glass facing portico upon the door for each room as ventilation hole. Receiver as well as can observes the location of iwans in north and south in caliphate palace, that to use for sitting in different season and different daytime, this design as another climate solution. In next part will apply similar lifestyle aspects and built environment tools on the third period that research selected late ottomans period to show the similarity and differences

Next period is late Ottomans era, in this period will analyze similar lifestyle aspects and built environment to determine the similarity and differences with other periods.

3.3 Late Ottomans Period (1890 – 1918 A.D.)

Abbaside period lost its grace after 12th century, by Mongol attack led by Hulagu, that they conquered all middleeast within 15 years, they destructed and, looted demolishing all civilized look. Large library in Baghdad, (were one of famous libraries in old time) that contained valuable historical documents written many scientific topics ranging from medicine to astronomy was destroyed completely, according to who remaining alive that the waters of the Tigris river became black as a result of the enormous amount of ink from the books that were fell into the river. Many of the citizens of Baghdad tried to escape but were intercepted by the Mughal army and the number of dead ranged up to one million people. Mosques, palaces, public libraries, hospitals and large buildings built took a great time all the Mongols looted and then burned afterwards. Hulagu was forced to move the camp away from the city as a result of the foul smell that was rising from the dead and devastated city. After that the city has been destroyed and uninhabited for several years, [34].

The rule of Mongol continued till 1335 A.D. the time when Mongol Empire fall down, while another Mongol family Gelardan succeeded to rule Baghdad in 1335 – 1411 A.D., during this time Baghdad exposed to attacks two times by Tamerlane's grandson Hulagu, first time in 1393 A.D. and second time in 1401 A.D., in the second one killing and looted all things are similar to his grandfather attack Hulagu. Times from (1411 – 1469 A.D.) is new ruler ruling Baghdad what they called, black and white sheep Turkmen tribes. From 1411 to 1467 A.D., Baghdad under black sheep tribe, "Kara Quenolo", rule and from 1467 to 1469 A.D. Baghdad became under white sheep tribe, "Aq Quenolo", control. Shah Ismail I, who founded the Shiite Safavid state in Iran time (1502 A.D.), he is over of Baghdad in 1508 A.D. to his kingdom. After these different wars and occupations Ottomans who established massive empire invaded Baghdad at time, (1534 A.D.) to became all Iraq under them rule in time (1555 A.D.), to continuing till 1918 A.D. when they defeated by British army when invaded Baghdad in 1917 A.D., [35].

Ruin and remains of circular Baghdad, (see fig. 42) after it was the capital of Islam Empire. Baghdad that did not remain from its flourishing period is just its name. Baghdad was exposed for many wars and occupations. It libraries, had been fired and

Books fell into Tigris River, Palaces had been destroyed and houses demolished and burned, everything moved, from golden era to dark era, from schools and education to illiteracy, from construction to ruin. This is the condition of Baghdad in this period. Lifestyle in this period are more change, because almost people that survive from wars, escape away from inside city, and almost them found that gathering living according to religion or tribe, at first is the resort for survive. These gathering group life are located outside of Baghdad or in its outskirts.



Figure 42 Map from 1893 Show Districts of Ottomans Kindom in Asia, Iraq was Three Districts, Basra, Baghdad, And Mosul, [63].

3.3.1 Lifestyle during Period (1890-1918 A.D.)

Social Structure

This period represented the last time of Ottomans and British occupation then establishment of the Iraqi Kingdom. Historians mentioned that number of persons has risen to 30 million in 1534 A.D. when Baghdad was occupied by Ottomans and number of persons became 1280 million in 1867 A.D, this is because of injustice,

retardation and ignorance, hunger, corruption and diseases, that's come from turkification policy and collection taxes, royalty and levies to send it to Istanbul the capital of Ottomans Empire. The Ottomans Sultans were not care about Iraqi people, so they don't develop it, there is little schools (almost its religious types, and auto financing, Historian refers that Iraqi educated people in that period about 1%, and all schools according to Sultans policy that publish that schools educate sons bad things, so schools has bad reputation, in order to control people by remain behind), no healthy center and hospitals, no water pump station(people of Baghdad depend on water carrier to carry water from Tigris River till 1907 when established first water pump station for government building (Sarai) and little houses around it and no paved roads, (there is one paved road in Baghdad opened in the end of Ottomans period in 1916 A.D.) [31].

This policy made people to live outside the city in tribal gathering, sectarianism and religious gathering, depended on blood, faith and race relationship to protect them self from injustice, despotism of influence Ottomans Sultans. So historian divided people into three groups in last Ottomans Period, (see fig. 43). First of all, Wandering Tribes – Bedouins is (about 17% in 1905 while it was 35% in 1867). Second of all, Settlement Tribes – Farmers is (about 41% in 1905 while it was 59% in 1867). Finally, Urbanism Population – Cities is (about 24% in both 1905 and 1867). The percentage of countries and Bedouins is about 76%, that is mean almost people lived faraway of cities. Because of fear and poor, people depend on tent that made by wool in Bedouins, and depend on mud and palms trunk in farms. These houses were simply and just to keep them self from weather, and between time to time they are exposed to burglary from another tribe, because of, decency, revenge, hostility, faith, melee, forbid for cousin marriage and help intruder, [31].

Tribe system was built on contrast themes, from side they have, hospitality, generosity, precious, chivalry, helping, etc. from nobility of character, on the other side they had party spirit, revenge, zealotry, and principle your brother if he is unjust or wrong. The Ottoman Sultans depend on these concepts and loosen rein to them to fitting in order to weaken them power, [31].

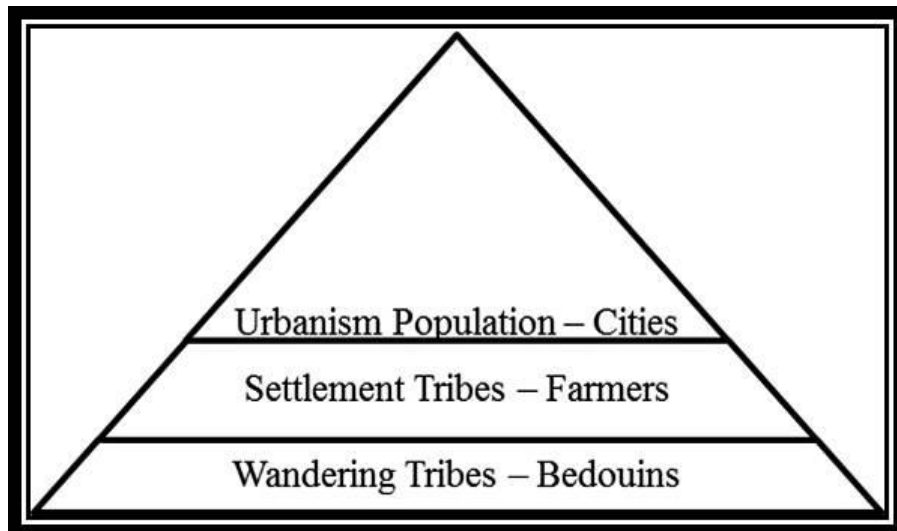


Figure 43 Social Classes in Late Ottomans Period (1890-1918), (Researcher).

The cities were built in district type depend on three kinds. First of all, religious gathering such as Al-torah district for Jews, and Agd Al-Nassarah district for Christian, Qambar Ali district. Second of all, tribe group emigration gathering from countries, such as Hitawein district and Tikarta district. Finally, crafts gathering, such as Al-Shaorjah and Al-Saffaren district, [37].

Family Structure

Family structure usually extended types that consists mother, father, sisters, brothers, grandfather, grandmother, uncles, and aunts. The grandfather represents the high authority and takes the decisions, and sometimes the eldest son who represent this mission. The sons help their father in his work, if they have not work or school. The girls cannot get out till fifteenth of last century except little families. Because there were a lot of reasons, the important one it was forbidden by clerics, although Islam instructions didn't forbidden women learning, so it was personals endeavor. So the place of women just inside house, the mother just can go to bring daily needs of vegetables for cooking, and almost grandmother sit down with her neighbors grand's in front of houses doors, because they don't have any work in almost family structure, [25]. The mother and her girls represent the food and wash dishes, clean the house, wash clothes, watching kids and give them shower, prepare the bread by mud kiln, and clean courtyard and washing it at morning and sprinkling it at evening. The secondary tasks for mother/grandmother is go to her neighbors and give them

present in them occasions such as, marriage, circumcision, birth, visit sick neighbors, consolation, etc., (see fig, 44).



Figure 44 Women Give Her Teapot to Man to Repair it, Woman Cleaning Mat from Window, Woman in Daily Visit to Her Neighbor, and Women Doing consolation in Neighbor House, (Researcher).

The present is amount of money, or clothes, or sheep, etc. according to social relationship between them. Women have more social relationships than men in Iraqi lifestyle, so the visiting between them are more, and sometimes for small occasions replace visits especially if her family don't allow to women to get out house, because almost these visits causes and bring problems to house, cause women like to transfer news and talks about houses secrets [37].

Iraqi families usually don't allow some women who like to transfer news to enter their houses. The young guys meet in cafe and they go to cafe after lunch time till evening, and they sit down to gather while their fathers and grandfathers sit down alone according to difference in ages, and aspect of respectful. Boys play in ways, and blind alley. The district designed in main way and blind alley. Each one in district know all families in his district, social relationships were so strong, they were lived as one family in different houses, each one in district responsible to defense and keep his neighbors, who need to travel in work for long time, and his family (nuclear type), has no brother, sister, grandparents, aunt, and uncles, he ask his neighbors to take care from his family, so his neighbors daily send them wife's to ask his family about them needs, and keep his wife preserved, in addition his neighbors say to him "God is with you, your house is ours except what God has forbidden" even the ill-natured, never harm or trespass his neighbors, there was nobility of characters [25].

Family Member Duties and Working

The women jobs are different from men jobs, almost all women in addition to house duties (cooking and cleaning) work in houses such as depilator, the women go to houses and do this job or client come to her house, this job were usually did in upper room in order to ba away from men family member, the other job is sewing which is practiced inside house, more over, basket weaver and cotton/wool weaver also practice inside house, for poor women that don't have men to work there was famous job beans seller, and milk with its derivatives (See fig. 45, and See fig. 46).



Figure 45 Women House Jobs, Sewing, Basket Weaver, and Cotton/ Wool Weaver, (Researcher).

The marriage in that period has more traditional details. Because of embarrasment, young guys usually wait their father or mother to start this so when father sees that his son is qualified for marriage he says, my son it is the time to marry you, what did you say, did you select a women? If he selected before his family member men and women will make investigation for her family, if her family is not appropriate to them they tell him to select another one or his mother will select for him, but if they are appropriate to them engagement ceremonies will start. At first they send his mother and may be his aunt with her to visit girl's house and his mother talk to her mother. The girl will be around to hear the chat, in the past the guy's mother had to enter bath with girl before engagement to see her body, because they did not allow tthe guy to see his wife till they bring her to his house. So, his mother will be responsible for her body's safety, her beauty, skin color, tall or short, if she is ok, and girl sister don't have opposed. Then the engagement will start by collecting the VIP person in district like mayor, important and nearest neighbors and friends, old family

members, uncles, cousins, notable persons, tribe sheik and mosque sheik (see fig. 47), [122].



Figure 46 Depilator, Milk Seller, And Bean Seller, (Researcher).



Figure 47 Bride with her Family Member, Bride with her Family Members and her Neighbors Friends, and Bridegroom with his Family Members, Friends, Mosque Imam, and Public Ensemble/ Band, during wedding procession, (Researcher).

The number of engagement persons make the girl family boasting between neighbors in them district, usually mosque sheik start to tell some verses from Holy Quran about marriage, then the oldest one start to ask for her hand, if girl's family knows guy's family his father or brother or uncle, go inside and ask the girl by her mother usually, her silence mean that she agrees, then he comes back to tell them that they agree, then directly read surat Al-Fatiha from Holy Quran, and girl sister and mother and her aunts start joy called (halahil, bu put her hand upon her mouth and move her tongue), [122].

The men usually work outside house, and each person do his job according to his skill, so there is who work in trade, and who work in agriculture, while the other practice them crafts in small shopes in side city, such as, blacksmith, mercer, shoes maker, who do circumcision, butcher, and so on. These jobs were practice inside cities, and they usually take part from them houses to be a shop, especially the

houses in center of city and houses that located on the main roads, [122], (see fig. 48).



Figure 48 Men Jobs, Barber, Blacksmith, Butcher, and Mercer, (Researcher).

Manners

Prophet Mohammed (P.U.H.) says in hadith Sharif (verily I sent to complete nobility of characters), [140]. From this Hadith we can understand that Arab was having nobility of characters and the Prophet Mohammed (P.U.H.) sent to complete these characters and learn them to abandonment from bad manners. They are precious, generous, courage, zeal, chivalry, hospitable, etc. from past and till now Arab hate and dispraise niggardly and they satirize him in poetry and stories. This important manner makes them to think about the reception in any house or shelter, the furniture and span is important to receive the known/unknown guests. It must host guests and not ask guest about his demand just after three days. Reception must get all available comfortable means for guests [31].

In districts of Baghdad there are more and more folk customs that make these habits sub-unique by them, for example, replace dishes in in holy Ramadan that means every house put some of what cooked in dish and give it for three to seven neighbors. Another example is wearing (Charawia on head, As'saya, Zibone with Kufia, etc.). And ho get educated wearing pantaloons and jacket and (Sidarah) on them head [25].

From generosity, Iraqi people used to receive guests and visitors. And they considered this feature as representation of courage. Hospitality must doing well, from where polite way of speech, smile with him and do not frown, preparation good and suitable meal to him, and what important that house owner must not eat with his

guest eat one's fill, and if guest very important he must assume service by himself [152], expression about guest value.

Religion

In Iraq there are a lot of religions, the main religions is, Islam, and Christianity, Judaism, Yazidis, Subean are minorities. So there are mosques, churches, and virtuous tombs. This variety of religious is come from past periods and constructs various social cultures that have same lifestyle, and different religious ceremonies. Almost these ceremonies were donning in common way.

Cooking and Food

Iraqi families has three times for food, breakfast, lunch, dinner, in addition they take light meal in afternoon called (Assriyah), and in winter in evening after dinner take light meal when they spend evening in conversation. The breakfast always consists of bread, milk and it's derived, eggs, and tea, the famous breakfast in Baghdad, bean and eggs, and cream with Kahi (Kahi is light flakes of bread in layers putted in hot mixture from water and sugar). These famous breakfasts are usually sold in morning by hawk in pushcart. The main food in lunch is rice, bread, and broth, as well as there is famous Iraqi food, such as, fish (Maskof), (Dolmah), porridge, Kebab, etc. in dinner they almost eat light food. They take breakfast after dawn-pray, especially grandfathers and parents, the lunchtime start after noon-pray, in lunch they eat together except who may be late for more than two hours. Lunch time is start after maghrib-pray. If there is guests the food late till the guest arrived, if guests from family member's guest take food with all member family, but if they are foreign (such as friends), the men eat with men and women eat with women. If someone knocks your house gate you will receive him and do hospitality for three days, then ask him about his demand. The reception must be separate from family zones by sonic and visual and must putt directly after the main gate, to give more privacy to family members, [25], (See fig. 49).



Figure 49 Two Women Preparing Food, Cooking Pot, and Two Women Making Bread in Mud Kiln, (Researcher).

Oskar Reuther (1910) mentioned that there is no common meal in Iraqi house gathering family members like European families, in fact it is not truth. Iraqi family have three times for food early morning, noon, and evening, in all these times all family members have food together except if they have guest, if guest from family members, take food with them, if not he take food with men in reception [152].

Visiting (Daily, Monthly, Weekly)

The visits are usually, neighbors, family members, friends, and foreign. Neighbors may be the more visits or daily visits, in Iraq social structure, neighbors consider family, so for them daily needs some time mother forget to by something that she need for her day food, such as spices, run out salts, etc. she directly go to her neighbors and ask her about what she need [25].

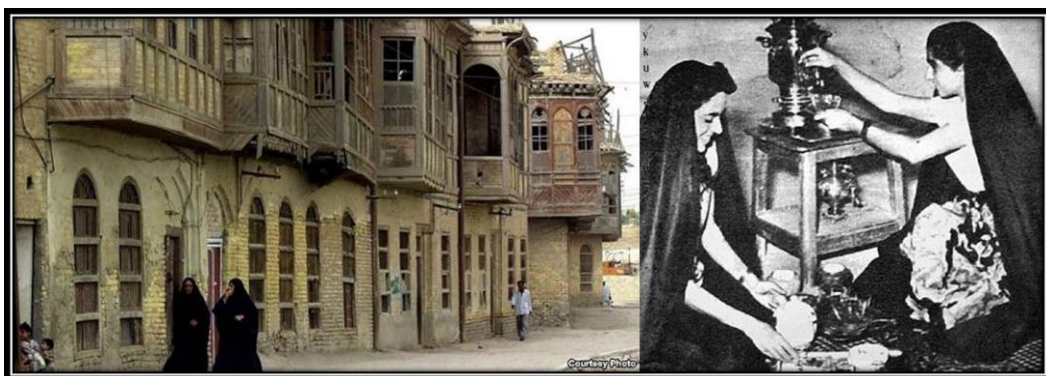


Figure 50 Women Outside House Wearing Cloak Going To Visit Them Neighbors [12], and Two Girl Friend During Daily Visit, Drinking Tead on the Ground, and Wearing Cloak [112].

As well as if sudden guest come in lunch/dinner time or the mother sick, she ask her neighbors to loan her some pieces of bread. At evening/ morning neighbor visits

played for short or long time for reason or without. The friends also consider weekly visits for young's and for parents/ grandfathers. The monthly visits usually family members, and there are occasion's visits for feasts, marriage, circumcision, and patient visits. Family member visits may be taking several/couples days. The guests get for high interest, from where sleep place, food, sitting place, etc. [25], (see fig. 50).

Sleeping and Sitting

Being poor was a basic factor to determine house furniture because of wars and occupations, so it is clear that furniture in houses under Ottomans colonialism was so simple, because almost families just think about their food, and they used easy furniture made from palm and tree branches, made by handcrafts. After Iraqi Kingdom was established, and when people educated and cultured after the school, they started to think about their furniture inside house, and merchants start to import material such as wood, and equipment that improve handcrafts to product furniture, as well as import ready furniture, this for highlife class [25].



Figure 51 Woman and Man Sitting on a Bench in Courtyard While Drinking Tea [112], and Family Members Drinking Tea with Pastry (Usually At Evining), (Researcher).

While proletariat remain to use simple furniture, they use carpet, rugs, quilts, billow, and blanket, that made from wool, cotton, and feather made by handcraft, it is easy to carrying from room to another, especially that Iraqi house depend on moving function according to day time and season, for example they sleep on roof in summer

nights, and in basement in noon. They used to sitting on the ground and lean on billow that take cylinder or rectangle shape, especially men, and sometimes they put sofa made by palm branches, and put rug made from wool on it, [25].

Iraqi people design their house to be suitable for them according to changes of climates between day time and night, and between summer and winter, so they are used to sleep on roof in summer night, and in basement in noon in summer, and in north iwan in summer while they sitting in south iwan in winter because of warm, [152], (see fig. 51).

Studying and Education

Ottomans colonialism was not interested in education because the Sultan did not need people to know facts in order to remain obedient and never stop against government, so statistics in 1914, refers that number of student is 7378 from boys and 600 from girls in governmental schools, and about 10000 students in religious, special, and foreign schools. This numbers is from Ottoman documents, and it is illusory more than it is real, and there are two schools to graduate teachers opened in the first of twentieth century and one school graduate layers opened in 1908 [23].

The other kind of schools is that religious kind and lead by clerics for both sects (Sunni and Shea), this schools were learned pupils read and write and Qur'an, it were found near religious places such as Holy Karbal'a, holy Najaf, Samara, and Baghdad, this schools were called, (Kittab/ Kitateb or Takiya), and the teacher called (Mullah), (see fig. 52).

In addition, there is religious circles schools held in houses. Girls were forbidden to learn because the clerics give a legal opinion that school deprave manners, that make common people refused to teach their children, this policy of Ottomans called political despotism, that aimed to put people under fear, legend, and illusion, because if people know the facts will liberate from fear, cowardice, and spoliation, then liberate from subordination and despotism so that what Ottomans theocratic authority dread, [31].



Figure 52 School inside One of Baghdadi Houses, Hold in Courtyard, the Teacher, (Mullah) Appear Holding Stick, While Students Sitting on The Ground, [112].

The foreign schools followed Judaism and Christianity the Christian established schools by missionary campaigns in two kinds, first kind Catholic campaigns started from seventeenth century and it was sponsored and supervised by Catholic Church in Roma, Italy. The second kind Protestant missionary campaigns started in nineteenth century sponsored and supervised by Assembly of Protestant missionary religious England. These missionaries were able to obtain the approval from the Ottomans Authority in order allowing them to establish a monastery and church to practice rituals Religious rituals freely in the places in which they reside, in order to spread doctrine that aimed to it among Christianity sects in Iraq (Armenians and Nestorians, Chaldeans and Syriacs) [32].

Ottomans Authority declared in middle nineteenth century that education is a part of affairs that related with non-Muslims religious and sects, and gave them freedom to open schools and manage its with way that they think it is appropriate to them, without any intervention from Ottomans Authority. For this reason Judaism as well start to open schools after they were educate them children in houses and it was called HEDER (Hebrew word mean room that use to learn children the basics and

teachings of Judaism religious) this school that hold in teacher house learn them read and save passages from the Holy Torah and books of prayers and supplications, this schools started in the second third of nineteenth century, in 1832 they established Midrash Talmud Torah and this consider oldest Judaism Culture Foundation in Baghdad, the teachers was the important Rabbis, both HEDER and Midrash were for boys only, in 1840 thy opened YASHIFA it is to graduate Rabbis, religious leaders, judges, and preachers to practice religious and its teachings. After established the Allianz Association in 1860, that interested to protect and develop the education level of Judaism in three continents Africa, Europe, and Asia, Allianz open first school in Baghdad in 1864, [32].

Occasions Choices

There are many occasions in Baghdad lifestyle, such as, birthday of Prophet Mohammed (P.U.H.), (see fig. 54), in this occasion hold celebration in houses and roads and preparation with many kinds of foods and sweets, and chanting with Islamic chants after reading Holy Qur'an [36].

Day of Prophet Zachariah (P.U.H.) prophet of Sabean, All Iraqi people celebrate on this day (first Sunday in Sha'ban month that come before Holy Ramadan), (see fig. 53) the story of Prophet Zachariah (P.U.H.) was mentioned in Holy Qur'an how Prophet pray and ask Allah to endow his son because he became elderly and his wife barren, so Allah respond to him and preach him with prophet Yahiya (P.U.H.) and sign of this preachment is fasting for three days and don't speak to any persons, (Holy Qur'an), women who don't have kids especially son's vow to God in this day if she get kids will lighting candles, and distribution, sweets and some nuts such as pistachio, almond, etc. for every year, in addition Christian celebrates on this day because prophet Yahiya (P.U.H) cousin of The Blessed virgin Mary (P.U.H.), as well as his father prophet Zachariah (P.U.H.) was her sponsor, [9].



Figure 53 Family Celebrate with Neighbors in Day of Prophet Zachariah (P.U.H.), (Researcher), and Picture Showing the Sweet and Candles in Same Day, [9].

Commemoration of Al-Qadr night that holy Qur'an reveals to Prophet Mohammed by Faithful Gabriel (in odd days in last ten days in holy Ramadan), pass the night awake by reading Holy Qur'an and prayer in mosques for men and women in house and always with neighbors women, [36]. Another important occasion is (Ashura'a) start in tenth day of first month (Moharram) in Islamic calendar, in the tenth day of this month at (61 Hijri, 680 A.D.) killed Imam Husain with his sons and nephews and cutting his head and take to Umayyad caliphate Yazid and captive his ladies, (see fig. 54) in this sad days almost women and children dress black color mourning about Imam Husain and distribute goods as food and water because they killed thirsty, in addition women commemorate this occasion by invite her neighbors and district to his house to lesson to obituary Imam Husain and they cry for him, then lesson to lecture by (Mullaya), then distribute something to eat with water and leave, there are ritual drama show in roads represent the battle, [85]. Another important occasion is the pilgrim, circumcision, marriage, etc.

Performance religious rituals influence the design of house especially, the rituals and ceremonial that practice in houses, or some of its part practice in houses, client always thinking about the size of and dimensions of reception and its place that must be more closer to the gate, and always thinking with place for special bath to serve reception and it must be not use by family members, some ceremonies and ritual, offer food and open them receptions to receive persons who come from other region to practice the ceremonies and rituals. This kind of cooperation is giving more powerful for social relationship and neighborhood relations.



Figure 54 Prophet Mohammed (P.U.H.) BIRTHDAY Celebrations in A'damiyah, Imam Abu Hanifa, Baghdad [85], and (Ashura'a) Rituals in Holy Kerbela' [36].

Tribe/ Relation/ Politician

As mentioned in social structure, in this period according to unstable situation, people resorted to their tribes, to feeling with safe and power, the tribe rule were strong, and head of tribe was responsible to take rights for his followers from any one, whether were person or tribe when aggression happened. Tribe became has influence in political and economic situation, when tribe refused to pay taxes to (Wali) (the person who represent Ottomans state in regions), it effect the economic situation, and sometimes tribes doing that to forcing wali for realization some requirements, whether it is individual or social requirements. With different tribe, each one became small state with its special region that represented in its land. For tribe were jail and private rules, head tribe was the judge between his tribe members, and he was judge and punishment according to his tribe rule, [31]. The tribe domination is an evidence of weak of Ottomans Empire in its districts, and civilian mutiny between time to time, is to subjugation Wali in each region for them requirements.

Meeting Places And Entertainment

Public baths, because of lack of baths in Baghdadi houses, they went to public baths time to time in their district. The public baths contained three halls, cold (Frigiderium), warm (Tepiderium) and hot (Callederium), according to Ottomans

public bath that is originally influenced by Roman public bathes. One for taking off their clothes, the second one for activities before entering the main hall, and third one is the main hall that contain hot water and it has small benches and the other accessories consist of well to pulling water. In the middle hall, bath barber sit in it to make all body shaving, store for keep the wood and anything help to heat water called (tumah), they sell hash to crafts that is mixed it with lime, this mixed instead of cement for different construction purposes, in addition this mixed is became hard and resist the salts. The person who is responsible for heating water called Mishalchi. Alhamamchi - the owner of bath - was sitting on a bench in the entrance of bath and on the wall behind him hanging, overalls, and towel, fiber (bath-sponge), and soap. In front of him was someone to sell tea, cinnamon, and lemon [31].

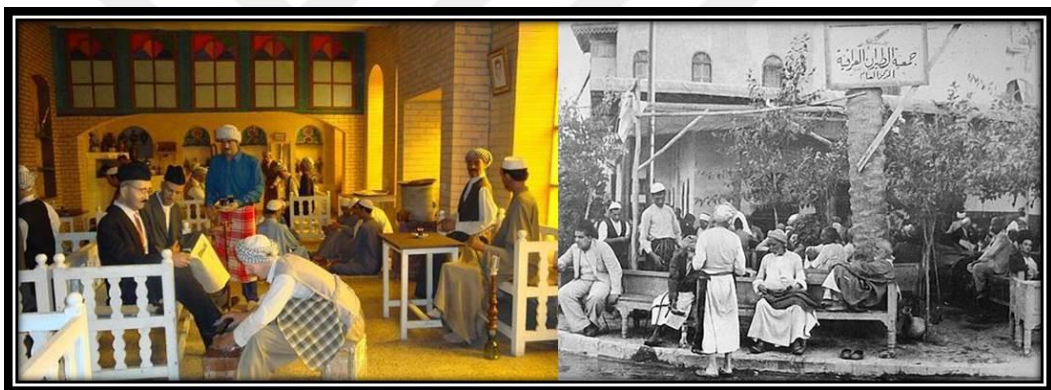
After taking off clothes the person dressed overall (bishtimal) and wood sabot, inside bath as well there are masseur that he use sack of wood for more body cleaning. In addition there was baths for women as well, so they take them food and take the kids and go from morning till evening as a journey because almost women were don't work so, this opportunity to get out and get lunch with women district and the old women see the young's to select someone for her sons, because it was tradition in that period if someone need to ask for girl hand, his mother must to see her naked so usually she enter bath with her to see if there any fault with bride body. Public baths play great social role, so they were coming to it in groups especially, in religious and social occasion, such as, feasts, joys, and sadness, [49].

As tradition, before circumcised the father take his children and his peers to take shower from his account, as well as the bridegroom his friend take him to take shower in morning of his marriage. Moreover when family has consolation after the seven days when it end, friends, family relatives, or neighbors take them to take shower and shaving them beards. So, public baths are used to take shower, introducing between men/women each other, opportunity to get out for women, select young girls for engagement and marriage projects, applied some social traditions in sadness/joys, and give more social communication [49], (see fig. 55).



Figure 55 Public Bathes for Men, and Public Bathes for Women, In Baghdad (Researcher).

Other kind of meeting is cafe, it was represent the place for, meeting, discussed political, social and local situations and issues, entertainment place, exchange of views, and so on, so it was public club, (see fig. 56).



Figur 56 Cafe in Baghdad, (Researcher), and Real Cafe in Baghdad, in Summer, in the Palm Trunk Hanged Placard refer that this Café is Place for Iraqi Flying Society [112].

3.3.2 Built Environment, Urban Layout, and Houses/ Palaces

Iraqi houses in late Ottomans period divided into two parts, first one farmer's houses, that built in farms and villages and the second part is city houses, that built inside cities, the different between them determined by plans and materials. In this period happen emigration from countries to city, because weak of Ottomans state, and cities are suitable for crafts that can get work easily. The other reason is increasing of tribe powers, that produced unjust "sheikhs" who wrong people and take them money with reason to protecting them. In addition almost lands were following to head tribe, and almost them were feudatory, and people growing to eat

and satisfy and keep barely alive [31]. almost those emigrated lives in groups and establish special districts according to tribe but without head tribe, craft, and sect or religion [152].

Size Of The Lot Of Houses

The lot of houses at first comes according to need, and according to economic situation of owner, so there are huge and small houases are together in same district. In addition, that was determined the organic fabric of urban planning. Then the government depends on urban design to planning new district. The new lot was different from district to another, so there are 200 m², 250 m², 300 m², until 800m², this division depends on owner situation, for examples, wealthy and important employments take large area, while common people take 200 m².

Organization Of The Houses And Urban Design Layout

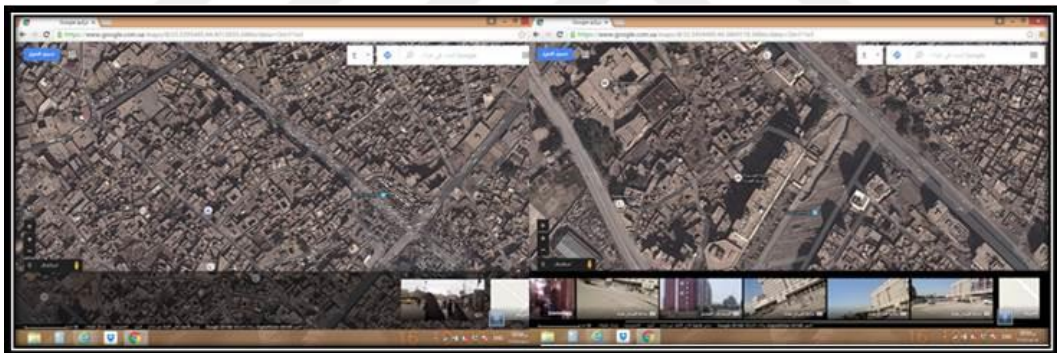


Figure 57 Urban Planning Organizations, Sabunchiah District, in Baghdad, [93].

The urban design of houses is organic (see fig. 57). The organic urban planning is similar to the Islamic city layout. Mosque is in center of city and shops near it, and organic roads start from this center to narrow and wide in rhythm way, and formed usually closed alley (cole de saq) in the end. In some other districts, there are shrine in center or just shops and Mosque (see fig. 58). Each district has specific craft, or sect or religion, or similar tribe member. Houses which determined this organic planning because of different in width of elevation, long of lot, and almost these lots are have not right angled.



Figure 58 Heritage Districts of Baghdad, (Shawaka District [112], Al-Rashed District (Researcher), Fadhil District (Researcher), and Agid Al-Nasara Districts [112]. Minaret are Appear in Second and Fourth Pictures.

Materials Of Houses

The materials that were used in houses are baked brick, mud brick, wood, Iron (I section shape), lime mixed with ash as binding materials that make wall strong. When the time passes, they collect the ash from public baths and from mud kiln after make bread, the lime founded in Anbar governorate. All materials is local, just some kind of wood that they import it from neighbors countries, that use in roofing, before use Iron and brick in trimming way in roof or domes.

Transportation Means

Before year 1918 cars were not known as means for transportation, the main means were horses and donkeys, and they use boats and “Guffah” as river-transportations means, (see fig. 59). In the late of Ottomans period appeared in Midhat Basha period who was the “Wali” for Baghdad in 1870-1872 A.D. His rule did not continue for long time, and historian consider him best one from Ottomans “walies” because he was interested with reform projects. The “Wali Midhat Basha” establish new project for transportation called “Gari or Cari” that is long cab to lead with horses, and move on railroad, (see fig. 59), “Gari” was common in Istanbul in that period and it was called “tramway”. This project finished at the end of year (1870 A.D.) and it is continued to work till year (1941 A.D.). Other kind of transportation is small cab to lead with horses also called “Rabal”, (see fig. 59) Donkeys and horses were use inside organic district roads, while “Gari” and “Rabal” used in main roads, and “Gari” was public transportation means while, “Rabal” was private [42].



Figure 59 “Guffah” Appear in Tigris River [112], “Gari” Appear on Railroad in Baghdad [112], Cab, and Donkey, as Transportation Means (Researcher).

Farmer Houses

The farmers houses is two kind simple houses contain 1-3 rooms (see fig. 60), aligned in in one line or take L shape, facing open space or semi-courtyard what is called Hosh, contain portico (Tarmah), Iwan (see fig. 61, see fig. 62) [152]. These houses were built by mud as “Ttof” each line of it is between 30-55 cm. and each line must dried before building one line above it (see fig. 63), the roof of these houses usually from palm trankes and mud (see fig. 64).



Figure 60 Simple Houses In Anah, Iraq, [152].

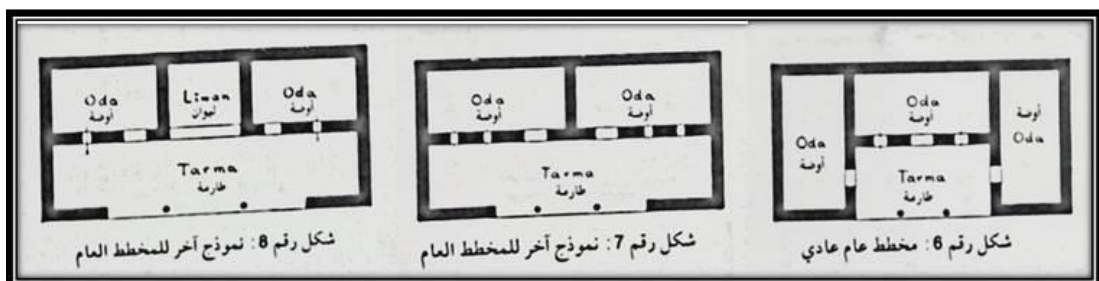


Figure 61 Typical Plans Represent Kinds Of Portico Houses [152].

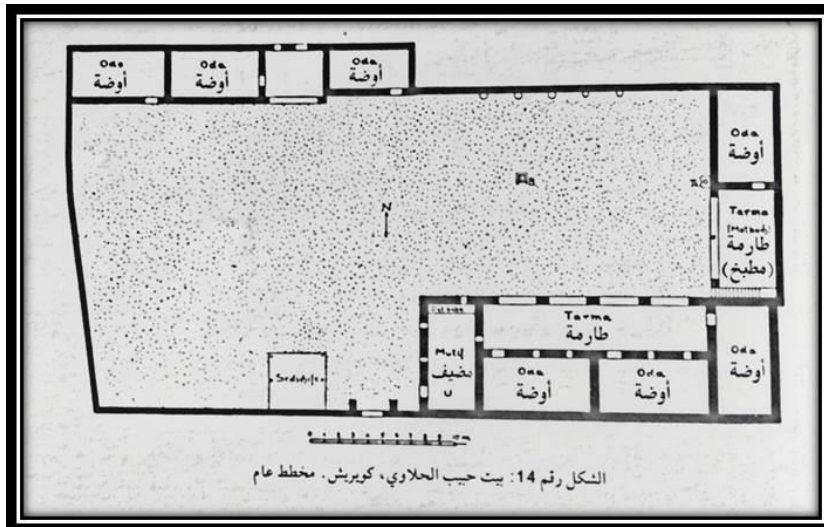


Figure 62 Typical Plans of Rich Farmers, Plan House of Habib Al-Hillawi, Kweresh, in Hilla, Iraq [152].



Figure 63 “Ttof” Way of Built in Addition to Mud Brick, and Mahdef in House of Mud in Village in Diyala, Iraq, (Researcher).



Figure 64 Roof of An House in Village Built By Mud and Roff by Palm Trankes, (Researcher).



Figure 65 Old Big Mud House, Appear in Picture, Size of Windows, Portico, L shape Plan, and Courtyard, in Diyala, Iraq, (Researcher).

Second kind is for rich farmers and is different from the first kind by numbers of rooms and contain reception what is called Mahdef, or Diwankhanah/ Diwanyah/ Diwan (see fig. 63, see fig. 65). The reception is always segregated from other rooms, and has exterior door in fence directly. The different among plans seems in the spaces between rooms formed what is called iwan that use to seat in different time according to it situation north or south [152].

City Houses

The farmer portico house is considering the base of city house. City house are usually consist of two stories. Generally, city house divided into two parts; one is reception called (Diwan) for guests and visitors, and second part are for family, called (Harem). In addition other rooms for multi uses according to its suitable using in different times, winter or summer, morning, noon, or evening, so family member move from basement to “iwan”, and roof [152].

The house include, rooms, “ursi”, “talar”, basement, courtyard, “shnashyle”, Terrace (Msanayah) facing Tigris River, kabashkan. Liwan. For more clearly the research explain each term in brief;

Ursi: contain from three ribs built and one ribe slide door or door contain two leaf, the door must located in wide ribe and must be glazed the slide this space use for cold days, this kind of room is familiar in China houses, (see fig. 66), (see fig. 69).

Talar: it called in Baghdad slang language, it is mean room rounded by three built ribs, and one contain columns, and the rib contain columns facing portico or courtyard, this space use to live in daytime according to its situation and according to season, it is located in ground floor usually and if it is located in first floor its level highest than (tarmah) portico, so its entrance from sides, and the front elevation contain handrail for safety, (see fig. 66)

Liwan: or called Iwan, it is similar to Talar, but the open rib didn't contain columns, usually contain arch and facing tarma or courtyard. Both talar and iwan use to live in daytime, in summer family use iwan and talar that located in north, because of shade and soft air breeze, while in winter the family use talar and iwan that located in south because of warm and kept from northern cold wind, (see fig. 66).

Basement: (sirdab) it is Persian word mean cold water, this space use for sleep in noon time in high temperature time, as well as part of it use for keep food that need cold area, (see fig. 72), basement take light from courtyard because it must located under it, the arrival to basement is from neam, that it is similar to basement but different in depth (minimum depth for basement, 3 m) and location, the basement take its light from light area on courtyard, and this light area as well work as ventilation in addition to badgure.

Badgure: Persian word (bad, mean air, and gure mean bring, so badgure, mean airway or bring air) it is similar to wind catcher in english, the form of "Badgure" being as chimney seems upper than roof of house, its function is to bring air to basement, and when air pass the chimney became cold till it arrive to basement because of different temperature between outside and basement, and that what make the basement is best place to live from noon till evening in hot days.

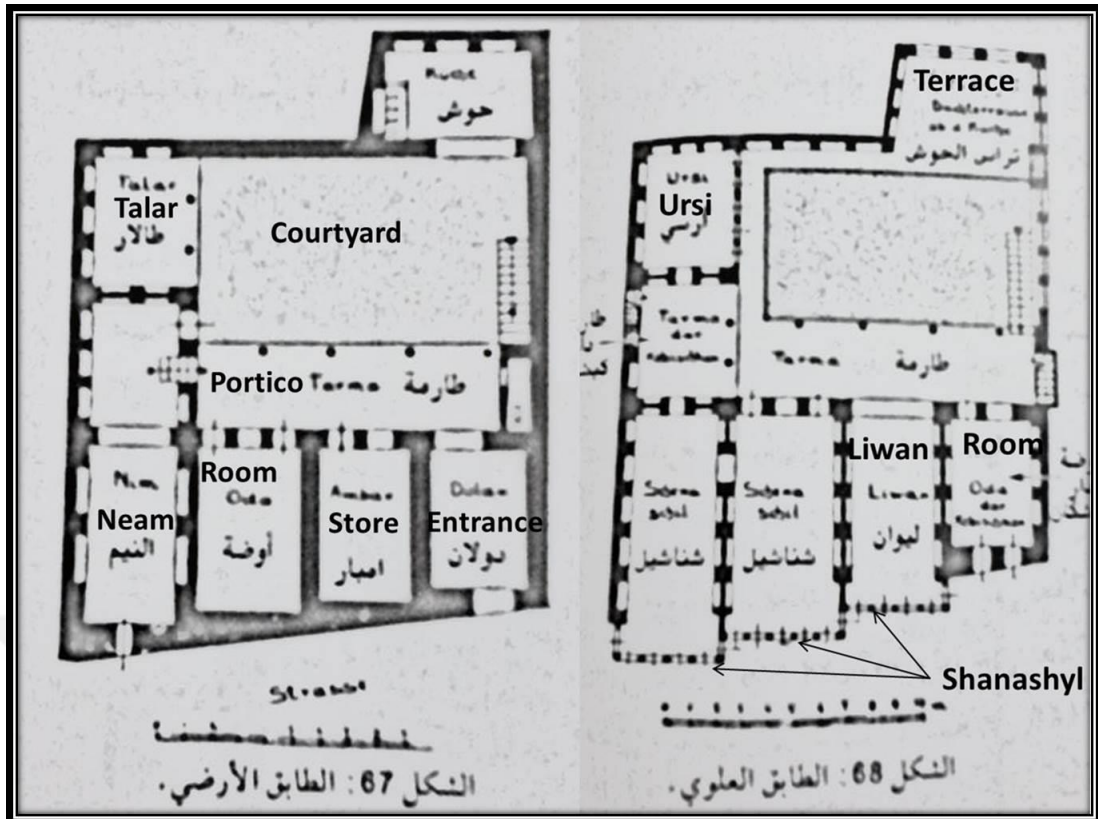


Figure 66 Ground Floor Plan, Showing, Courtyard, Talar, Portico (Tarma), Neam, Room, Store, Entrance, and First Floor Plan Showing, Terrace, Ursi, Portico, Shanashyl, Liwan, and Rooms [152].

Neam: similar to basement but it is differ in depth (from 50 cm till 3 m), it is consist side stairs to reach it. It located under rooms that surrounded courtyard, so it also facing courtyard, and it get light and ventilation from small opening on the wall, and from wooden grid installed after talar, (see fig. 66), (see fig. 71).

Takhtaboosh: it combined word, first part (Takhta) Persian original mean bench and second part (boosh) Turkish original mean empty, so it mean empty bench that mean that bench not in the same level of ground, this place under “takhtaboosh” about 60 cm use as cold store like freezer, to keep provisions, (see fig. 71)

Courtyard: is the place located in middle of house and open area, contain fountain what is called (fisqiah), trees, it consider the garden of house, it is connection area, work area for almost house work, it is amusement place, (see fig. 66), (see fig. 70). In an interview with Kahttan Al-Midfai, Iraqi architect when asked about courtyard concept;

“In last interviews, you were long for Iraqi houses courtyard concept that was not separate in Baghdad alone but in all Iraqi cities. Today courtyard concept canceled, Iraqi house became not differ from any house in world. Dose this matter has relation with globalization, and tyranny of western gustation on all life details including that home living?” [29].

he said,

“Civilization like airs, you don’t know come from were and go out from were and from any door pass. You don’t know if it is come from north or south, from east or west. Villa concept is part from modern, modern that we try to apply and react with it. Some of us accept it and the other refused, concept of villa became alternative of eastern house comes from the idea of the Western bourgeoisie, house in center surrounded by gardens, and it’s canceled the concept of courtyard, that is sad thing. The courtyard is core concepts of Iraqi house, and is the space that from it person see God face in day and night.” [29].

The typical traditional Iraqi house is that consists of square courtyard and room around it in all sides, (see fig. 67).

Room: It is normally with door and without windows if it located in the ground floor and it take light from door only or sometimes put small window upon door, while if it located in second floor it has window if it facing street its window will be shanashyle, while if not it will has small window facing portico, in general room use just in cold time, (see fig. 66).

Terrace (Msanayah): it usually facing Tigris River, it is huge terrace, part of it structured as cantilever, surrounded by handrail, it use for take breakfast, and evening chat, mostly founded in riches houses, (see fig. 66).

Shanashyle: It is called to the protruding parts to the street, all protruding must be window to call it shanshyle, it is Persian word from two parts (Shah Nashen) that mean king place, these parts make by wood and contain colored glass, it use to allow who inside to see outside without allowing to who in outside to see inside, so in my opinion we can consider it as breather for women especially young girls that not allow to them get out to be in touch with outside and to decrease inhibition that applied on girls in that period, (see fig. 66), (see fig. 68).

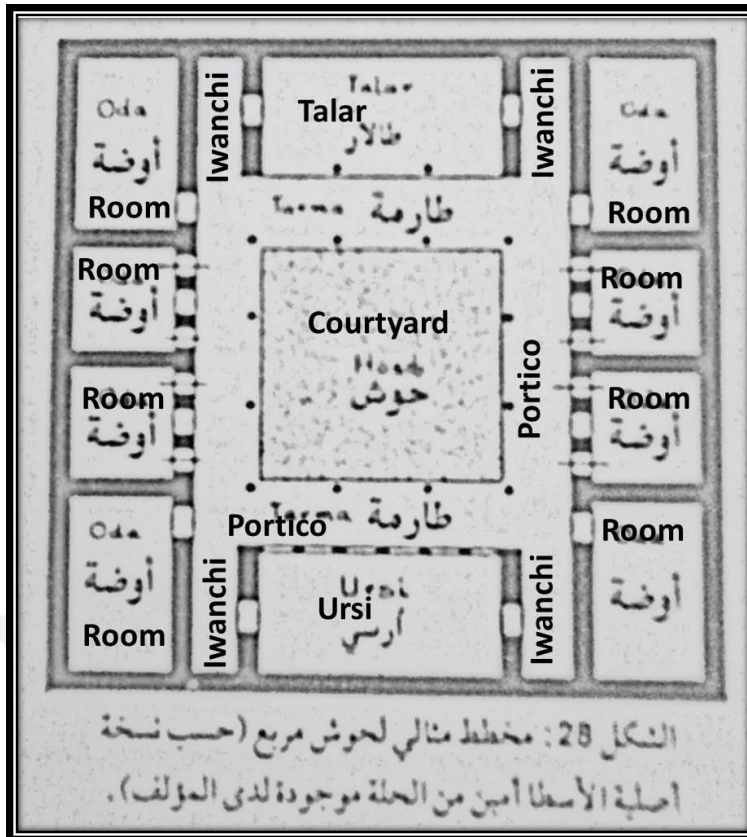


Figure 67 Typical Courtyard House Plan, Showing, Iwanchi, Talar, Rooms, Ursi, and Courtyard [152].

Iwanchi: In Iraqi traditional houses observe maintaining to make the rooms door facing the portico, so the crafts when can't do that sometimes solve this problem by using small corridor called iwanchi, and because of loving symmetry from people they applied this in both sides, and they add another roof for this iwanchi, that mean it roofing in lower height (mostly in mid-height of first floor) in order to get additional floor, (see fig. 66).

Kabashkan: It usually in first floor exactly above iwanchi, it is as well Persian word means (shoes place), that they putting shoes in this place before enter rooms and ursi and always it located, in both way similar to iwanchi. It is important architect element given to courtyard elevation essential character. Kabshkan elevation covered with slide windows and sometimes with grid wooden partition, (see fig. 71).

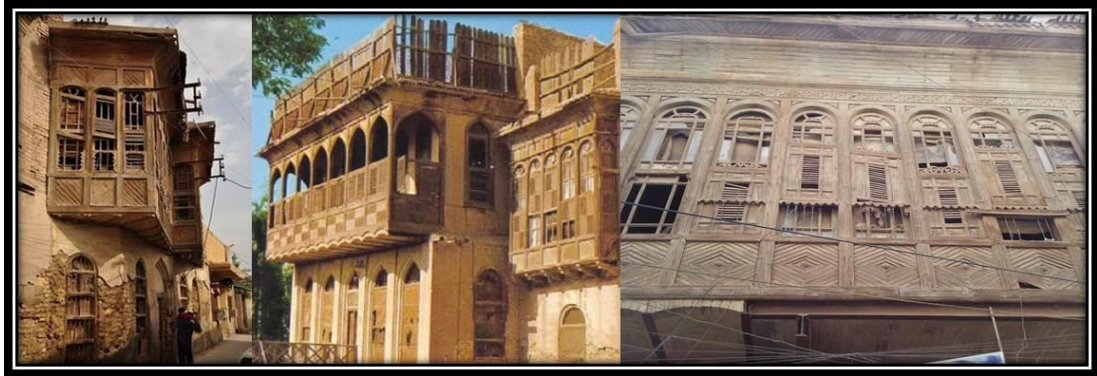


Figure 68 Shanashyle Wooden Work in Traditional Iraqi Houses Facing Street, (Researcher), [33], (Researcher).



Figure 69 Ursi in Traditional Iraqi Houses, Facing Courtyard, in Addition Portico Appear with Talar in Ground Floor [112].

Recievers can observe from plans that houses usually consist of one entrance and one courtyard, the difference is in the number of rooms and other second parts in house. Another kind of houses that consist of two courtyards “Haram” for family and “Dewankhanah” for reception) and two entrances, Owners for these houses usually big employers, big officers, in Ottomans state, and big trader, in addition to wealthy families, according to them work they recieve visitors between time to time in them houses especially daily visits and occasion visits.



Figure 70 Looking Toward Courtyard Through Iwanchi, Columns of Portico, “Fisqiya” Fountain, Rooms Doors Appear Also, and Looking From Portico in First Floor to other Side, Columns, Parapet, Appear Also, (Researcher).

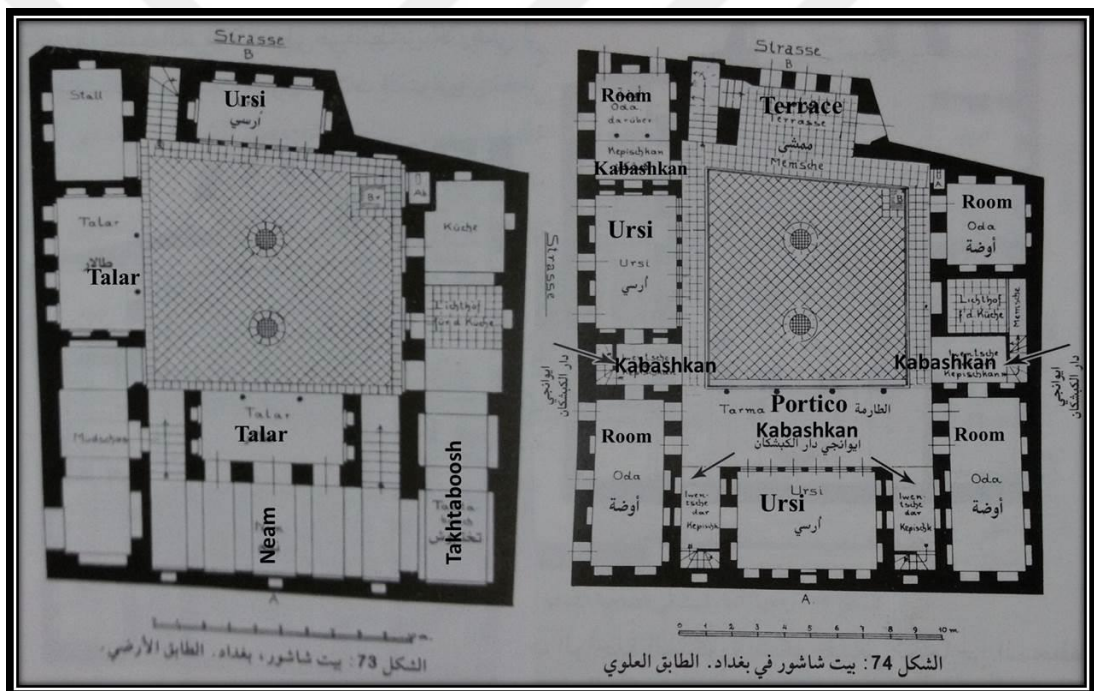


Figure 71 Shashor House in Baghdad, Ground Floor Showing, Ursi, Talar, Neam, Takhtaboosh, and First Floor Showing, Rooms, Portico, Kabashkan, Terrace, And Ursi [152].

The fear from state and ruler forcing people to go to whom in charge of management positions to demand them to help them in social, political and economic issues, and this habit is till days founded in Iraqi society, so each big manger and big officer need large reception to receive people to help them, and according to large number of visitors they designed houses to consist two entrances and two courtyards, in order to give more privacy to other family members, moreover the entrance of reception is

direct to courtyard that is because of privacy not important, while the family entrance is to turn with 90 degree after gate for privacy [152], (see fig. 73).

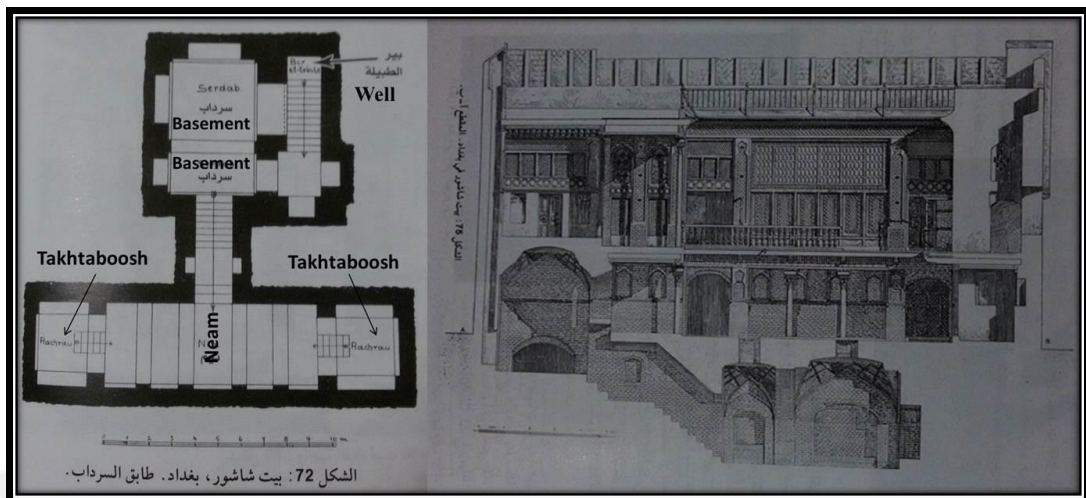


Figure 72 Basement Plan of Shashor House in Baghdad, Showing, Well, Basement, Takhtaboosh, and Neam, and Section, in House [152].

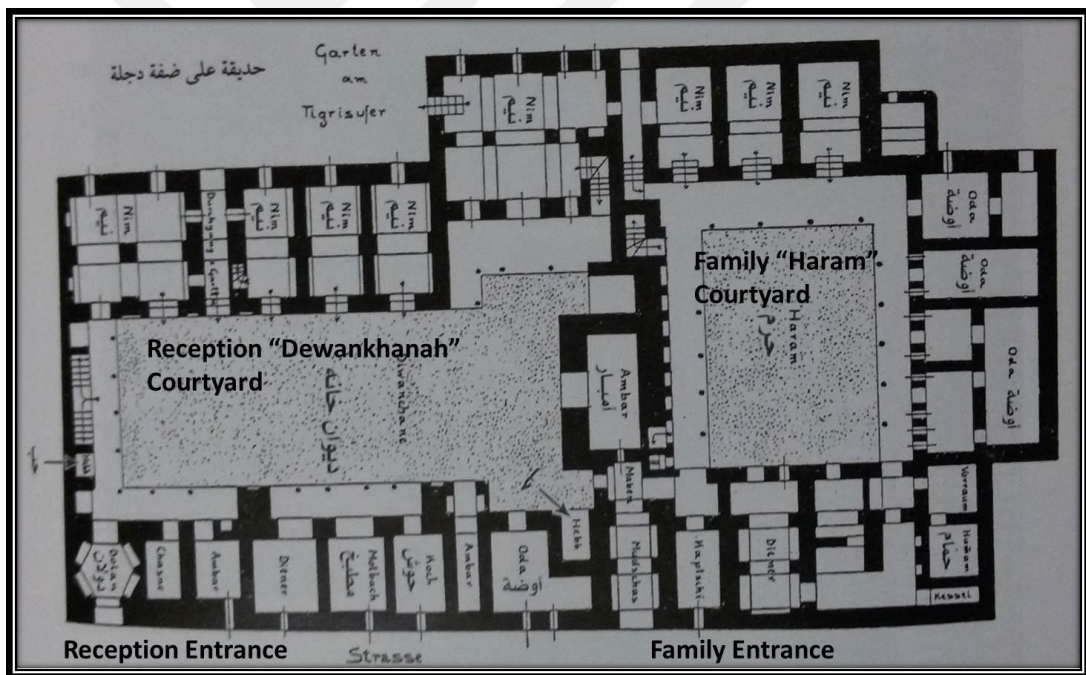


Figure 73 Ground Plan of Big Officer in Ottomans State, Showing, Large Size House, Two Courtyard, Two Entrances, and other House Parts [152].

Environment

The environment of Iraq is going toward desert, because almost months carrying heat, and dryness, and especially at the begging of twentieth century that weather became desert mostly and blowing sand storm became theme weather in addition to

drought. All these because of change almost lands from agricultural type to deserted type because of scarcity of water, immigration from villages to cities, poor of irrigation canals. For this hot environment Iraqi traditional houses were invented to find and apply several solutions to pass this difficulties of climate, so (Iwan, Talar, Ursi, basement, portico (Tarmah), Neam, courtyard, fountain, shanashyle, badgure, roof, material, etc.) all are solutions applied in these kinds of houses and make it comfortable to live, and almost of these solution still can use it by applying its in modern houses.

Decoration, Ornamentation and Arts

The decoration in this period depend on, wood, painting, gypsum ornamentation, and brick. The wood is appear in panels on the wall, the head of columns, muqarnass, and ornamented doors, (see fig. 74).



Figure 74 Wooden Head of Column in Shashor House in Baghdad [152], Ornamented Wooden Gate in Baghdad[145], and Grill Windows in Manahim House in Hillah [152].

Painting was not common in this period, while it is found in some wealthy houses, and not in all parts of houses they usually use painting in reception, from where show off (see fig 75). Gypsum work and brick appear in ceiling, gates, walls and corners especially in muqarnass (see fig. 76), (see fig. 77).



Figure 75 Painting Decorations in Wealthy Houses in Baghdad [152].

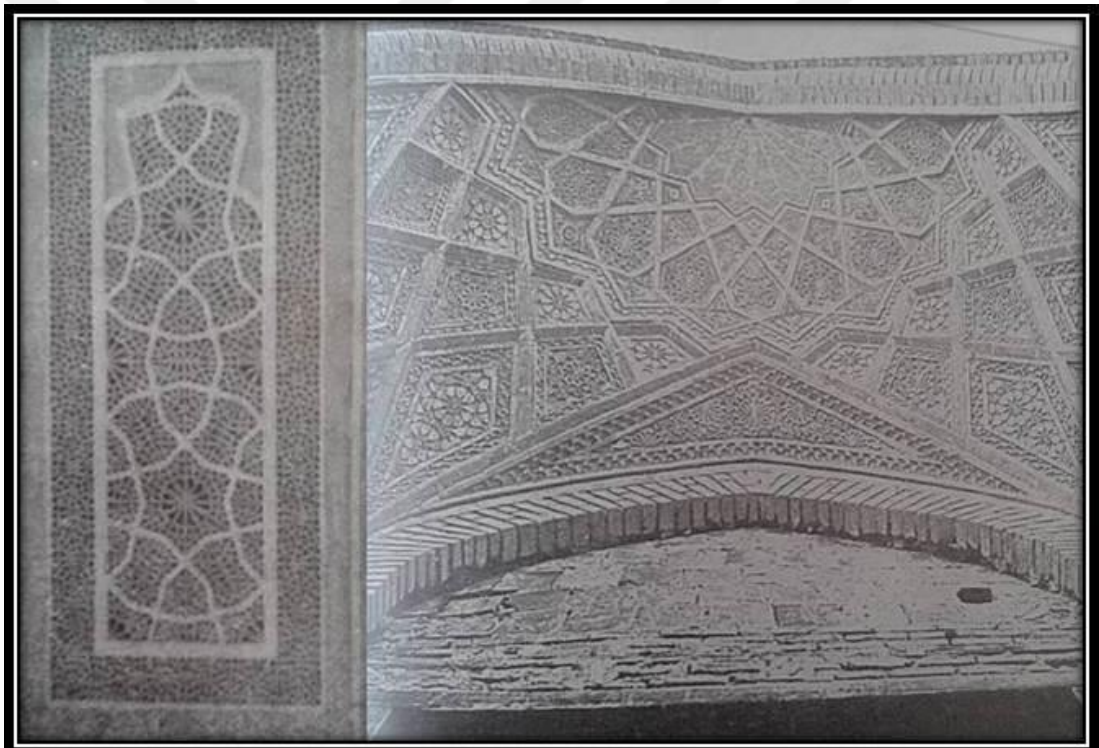


Figure 76 Gypsum Window Detail in Zubaidah House in Baghdad, and Ornamented Ceiling Entrance in House in Najaf [152].

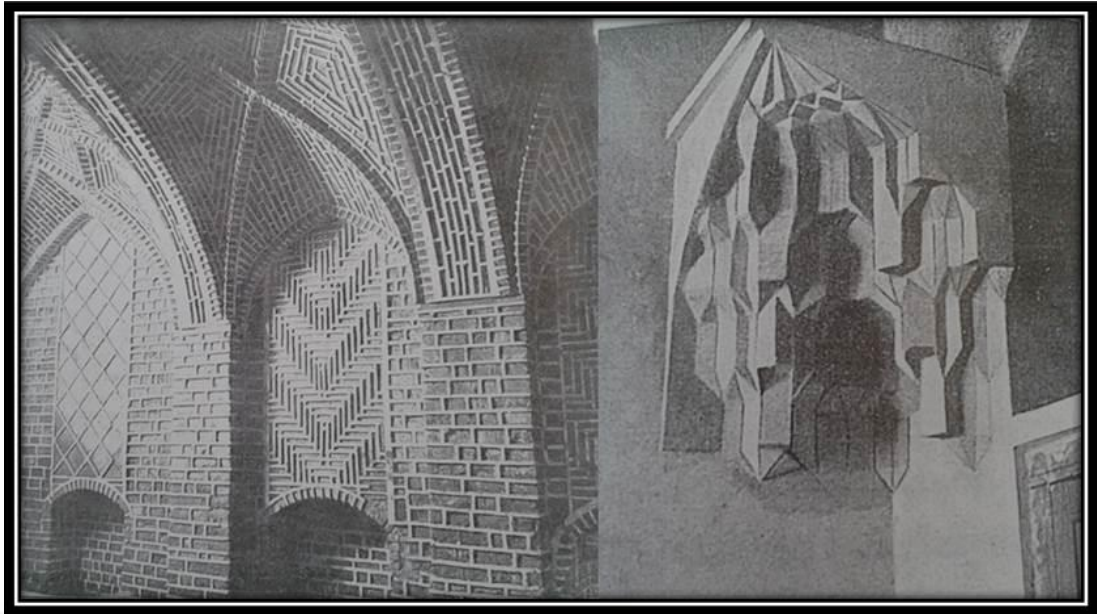


Figure 77 Brick Ornamentation in Shawol House in Hillah, and Muqarnas in Corner Detail [152].

Houses Analysis

Traditional Iraqi houses are considered as sustainable houses, because its age is at least one hundred years, and till now it is good and suitable for living, especially the climate solutions that are applied in these houses. It is considered greenhouses because it does not harm climate and it is healthy according to its street mostly not allowing car to enter so it encourage people to walk, and when they walk they will become healthy and not fat. And it is economic because encourage people for using public transportation, little use electricity especially for cooling, little pollution because little use of fuel for cars, And little using electric machine for cooling that destroy environment. These traditional houses are solved environmentally, and support social communication that consolidate unity, simplicity, cooperation, and live as one family on the district.

The features of these houses in general are;

- Decreased surfaces that facing sun, and aligned houses together, to decrease the rate of heat transfer.
- Benefited from ranging in temperature, using clay brick in the construction of the walls, thick walls, and reducing the number of openings, to reduce the

energy exchange with the outside air and in some extent to reduction of leakage and gathering dust.

- Decreasing rates of solar heat gain, by building deep courtyards surrounded by rooms and been forested. As well as to keep the cold morning air several hours and reduce the effect of wind laden with dust, and the use of high walls which provide a measure of shadows that desirable.
- Using “Badgure” and basement to bring and cooling air through “Badgure” to basement, to make comfortable and suitable temperature in noon time in summer to sleep in this place till evening.
- Horizontal and vertical movement to use the house, they use southern “Iwan” and “Talar” in winter to get warm, while they use northern “Iwan” and “Talar” to get cold in summer, in addition they sleep in basement in summer noon, and on the roof in summer night, moreover they sleep in rooms and “ursi” in winter.
- Using courtyard, this important space that provide privacy, and climate solution with trees and fountain, and place to continue with sky with less noise.
- Using “Shanshyle” that provide spread lighting for room without luminosity, blocking the inside of the house, so that they can see outside while who in outside are not allowed to see, cooling jars water, through putting jars in small holes in base of “Shanashyle” by air stream.

In next chapter research will compair these three different periods according to three main part, first of all, lifestyle aspects, secondof all urban planning and exterior elements and third one is plans and interior elements. the comparsion will give receiver clear results and advices in addition to see the similarity and differences through these periods.

CHAPTER 4

COMPARISION OF THREE PERIODS AND EVALUATION

Life style and culture change either toward the better or toward the worse, globalism aims to make everything similar, found in each place, cut the roots and assimilate the civilizations, heritages, habits, manners, and everything that determine an group of people, globalism plans to unify the way to make it the sole path for the world, and we go on either by our will when we imitate the other or not, when we think that we are wrong and the other is right.

Keeping identity, habits, culture, and lifestyle system is complex and difficult, because of speed of society mixture, especially in mass media. The designers must take care when they design houses and don't always apply all clients' requirements, and must have the power of cogency, in addition to the governments. My friend Mustafa, was astonished when he told me about place in London, after completing a new building in that place the worker started to use black and green fume and applied it on elevation, and his curiosity prompted him to ask the supervisor engineer, why you do this for a new building. He told him that it is the heritage area and we must make this new building look old in order not to deform the city sight, it is the right way to keep civilization and don't let lifestyle change everything in identity and habits, and for the people who like modern lifestyle, it is easy to establish new cities far away from heritage places. There is a massive difference between copying in blind way and imitation in modern way, people must be in touch with world development. In the same way, they must take care of the influence of other lifestyle in our lifestyle, customs, habits, traditions, etc. these have great values in our lives and we represent these values in each part of our life, in speech, doing, sleeping, even in form of house, and these values greatly determine our identity and culture, so if we miss these values, we will be similar to each other in each place on world, so not every new in lifestyle is right, and not each old is wrong.

4.1 Comparison of Lifestyle

In this final part, research uses lifestyle and some of its aspects to make comparison, in this part receiver will attach the influences of lifestyle in the design of houses through several elements. First element is classes, according to social structure, this element clearly explains differentiations between societies, and gives us the scope of human values in societies and the level of development. The second elements are family structure. This factor gives us explanation about the types of families, and the range of relationships between relatives family members. Third element is duties and working, these elements determine responsibilities for family members, that determines who makes decisions, who works inside and outside and how this affect the design of house. Fourth element is manners and customs, determination of the relationships between family members and neighborhood depend on this element, in addition, it determines the development of thoughts and manners. Fifth element is religion, the importance of this element in different sides such as privacy, social environment, neighborhood concept, orientation, and so on. Sixth element is cooking and food, these elements affect the place of kitchen and size, as well as if it is fixed or mobile kitchen, and gives and idea about the storage of food and the place that is specified for it.

Visiting element is important that explains the size and place of reception in houses, according to visitors, under the relationships between family members and between neighbors and friends. Another important element is sleeping and sitting, this element determines the size of spaces according to furniture, and give an idea about the type of lifestyle if it is complex or simple. Ninth element is studying and education, this element determines the level of family delopment, according to modern life, and its relationship between traditional, and explains the spaces for studying inside house and the privacy of place. The last element is the occasions choices, this element carries more explanations, such as giving an idea about the class of family in social life, explain the relationship between others, determine the size of spaces, determine the color choices, etc.

Table 1 Comparison Of Lifestyle/ Classes

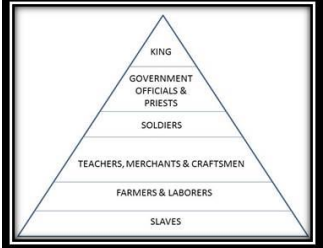
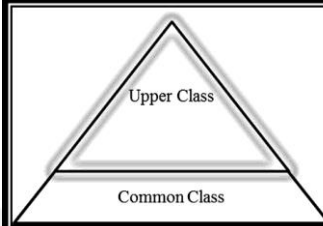
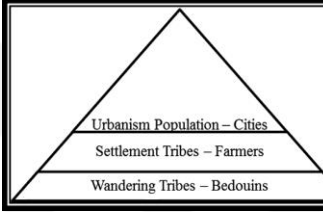
Item	Classes	Result
<p>Early Civilization Mesopotamia period</p>	 <p>A pyramid diagram representing the social hierarchy of the Sumerian period. The levels from top to bottom are: KING, GOVERNMENT OFFICIALS & PRIESTS, SOLDIERS, TEACHERS, MERCHANTS & CRAFTSMEN, FARMERS & LABORERS, and SLAVES.</p> <p>Social Structure, Sumerian Period, (Researcher).</p>	<p>Similar materials for almost all classes except for farmers and slaves that they use reed and papyrus, strong neighborhood for all, and similarity in representing needs and they never represent wishes except some parts of palaces. The difference is founded, in lot and dimensions of houses, decoration, and security situations.</p>
<p>Early Islam Abbasside period</p>	 <p>A pyramid diagram representing the social hierarchy of the Abbasside period. The levels from top to bottom are: Upper Class and Common Class.</p> <p>Social Structure, Abbasside Period, (Researcher).</p>	<p>Similar in using local materials. The difference appears in lot, house dimensions; the place is planned according to center of city, decoration and finishing, and little in security situations clear in location according to fortification and fences.</p>
<p>Late Ottomans Period</p>	 <p>A pyramid diagram representing the social hierarchy of the Late Ottomans period. The levels from top to bottom are: Urbanism Population – Cities, Settlement Tribes – Farmers, and Wandering Tribes – Bedouins.</p> <p>Social Structure, Late Ottomans Period, (Researcher).</p>	<p>Continues to using local materials for all houses. The difference appears in the way of gathering that depends on religion, tribe, and crafts. As well as appear in lot, decoration, number of stories, and dimensions according to economic situation of the owners.</p>

Table 2 Comparison Of Lifestyle/ Family Structure

Item	Family Structure	Result
Early Civilization Mesopotamia period	Strong relationships make the family structure extended that consists of father, mother, sons, uncles, aunts, and grandfathers/mothers, the other reason is that almost all these families depended on agriculture and they needed manpower, so they lived together in extended kind, in addition, they live according to their nature and no ideas and cultures effect their lifestyle.	Strong family relationship, Strong neighborhood. Collaboration in work. Large houses and large number of rooms. Divided work between family members.
Early Islam Abbasside period	Same kind of family. In addition, the development of lifestyle and mixing with other cultures, produced new kind of living called nuclear kind, that consist of father, mother, and sons, these kind of families usually did crafts, and they travelled looking for job, or they were usually captured by wars, in addition the safe and security situation also affected some families to live in nuclear kind, especially whom were influenced quickly by other cultures.	Strong family relationship and weak in nuclear kind. Two kinds of work teamwork and individual work. Two kinds of houses, large and small.
Late Ottomans Period	The situations that were mentioned in chapter above, affected people to live in gathering groups, the extended families were common for power and safety and work to love. Nuclear kind, (father, mother, and sons), also were found between people who have job in Ottoman state such as officers, usually they move to work in other districts time to time.	Strong family/tribe relationship. Two kinds of work, teamwork and individual work. Two kinds of houses large and small. Usually each district practices similar work in houses.

Table 3 Comparison Of Lifestyle/ Duties And Working

Item	Duties and Working	Result
Early Civilization Mesopotamia period	The rules in earlier period determined the duty of husband as the main responsible for the food and supply needs for his family, and his older son being his assistant, mother is responsible for house work, and her daughter is helper for her. In extended families, all men work in fields and crafts, while women work in households.	<ul style="list-style-type: none"> • Men work outside house and responsible for supplying the needs of the house. • Women work inside house and responsible for achieving house requirements. • Women need place to be in touch with outside and don't feel that they are in jail; author thinks that courtyard is the place that women do activities and be in touch with outside, as additional function of courtyard.
Early Islam Abbasside period	In Abbasside period, women get more freedom, more women became dancers, singers, and poets, in spite of Islam instructions, that order Muslim women remain in house if her husband secures all her needs, while if he can't, women can help her husband at work, or if she does not have someone who pay for her. Another new job that appears for women is being a beautician.	<ul style="list-style-type: none"> • Men and women work outside with more freedom. • In addition women work inside house also. • No change in design of houses, just in size and dimensions according to some furniture. • Courtyard continues in houses as main part.
Late Ottomans Period	In modern Iraq, women are prevented from teaching, and in the same way men according to occupation orders, men who work outside and women in the household, the duties of women include preparing food, cleaning, washing, in addition for new jobs that appear because of importing such as, sewing, and being a beautician.	<ul style="list-style-type: none"> • Coming back to earlier civilization that make women work inside the house, while women became usually responsible to go to the bazaar and bring daily house needs. • Men work outside house. • Courtyard is place for completing house work such as washing, cooking and cleaning.

Table 4 Comparison Of Lifestyle/ Manners And Customs

Item	Manners & Customs	Result
Early Civilization Mesopotamia period	According to rules in that period, for example Hammurabi Code, the code defines clear punishment for who misbehave or mistreat parents, wife, husband, sons and the others, manners were controlled by rules and not controlled by religion.	<ul style="list-style-type: none"> • Manners and customs determined by ruler in code. • Stronger relationships between family members and between each other. • Good relationship mean good communication and good communication means visits are more common. • Reception is important part in house.
Early Islam Abbasside period	Islam and other religion are the source of manners and customs, great Qura'n order Muslims to be in high level of good manners and customs, in order to decrease the gap between societies, and order Muslims to live in brotherly kind of life.	<ul style="list-style-type: none"> • Manners and customs are determined by religions. • Relationships between family members and between each others must be strong. • High level of communication style, such as parties, and other occations. • Reception represents the welcoming manner and hospitality.
Late Ottomans Period	With Islamic roots that are mixed with more and more different cultures because of wars, occupations, and conquests. The peoples are at the crossroad between Islam and modern life with its developments in all fields. Almost all people select the traditional manners as the guidelines for their life.	<ul style="list-style-type: none"> • Manners and customs are determined by religions, tribes, and ruler. • Strong relationship between family members and tribe members. • High communication between tribe members in the sense of power and safety. • Reception is the main part in houses and must contain all comfortable means.

Table 5 Comparison Of Lifestyle/ Religion

Item	Religion	Result
Early Civilization Mesopotamia period	Worshipping to different idols, religion is the government and divided people into classes. Temple was a benefit for rich while it was a loss for the poor (responsible for payment).	<ul style="list-style-type: none"> • Ruler is god and he is making the rules. • Temple is the place of worship in the center of city and usually is the place for wealthy families to pray. • Poor people worship and pray outside temple. • Religion divided people into different classes. • Archeologists think that there was place for each house to put idols to pray and protect house. • Poor people pay for temple and for rich people, it is the beneficiary. • Poor people remain in small and poor houses while rich people live in wealthy houses.
Early Islam Abbasside period	Islam is the main religion, in addition to Christianity and Judaism, non-Muslims are free. Each is equal, especially before Umayyade period, mosques for all classes.	<ul style="list-style-type: none"> • One God and rules is according to Holy Qura'n. • Mosque is the place for worship, court, and all Muslim issues. • Rich people and poor people pray together inside mosque • Religion unifies all people and cancels classes. • Place of worship is mosque and in house the part of pray must be clean, while it is not determined. • Rich people pay for mosque as almsgiving, and poor people is the beneficiary. • In early Islam, Mohammed (P.U.H) and the four orthodox caliphs periods there is no difference in Muslims houses, but later it changed.
Late Ottomans Period	Islam is the main religion in addition to Christianity and Judaism.	<ul style="list-style-type: none"> • Continues same as in Abbasid period. • Effects of religion appeared in Mohammed (P.U.H) and four orthodox caliph's and later disappear.

Item	Religion	Result
		<ul style="list-style-type: none"> • Almost all Muslims refer to pay almsgiving. • The difference in houses similar to Abbassid period appeared in size and decoration. • Crelics take religion as tool to achieve purposes, so they order Muslims to keep women inside house and prevent her from teaching. • House became the limited place for women.



Table 6 Comparision Of Lifestyle/ Cooking And Food

Item	Cooking & Food	Result
Early Civilization Mesopotamia period	Two kinds of food that does not need fire to prepare, and that needs fire to prepare. The place of cooking is mobile between courtyard, roof and rooms according to weather. The cook equipments and pottery, cook stove are made from clay, and kiln is the oven for making bread. The food store is pottery or clay container. The other way to keep food is dried food such as beef and veal. The cuisine was developed with its recipes to prepare food, [117].	<ul style="list-style-type: none"> • Barley and wheat is the main food in addition to date. • Two ways for food preparation fire/withoutfire. • Store is important in house to keep winter provisions. • No fixed place as kitchen, mobile kitchen from courtyard, to roof. • Kiln and stove is main equipment for cooking in addition to pottery and copper.
Early Islam Abbasside period	<p>More and more developed in the art of cooking, food table of caliphs are more developed, Ibin Sayyar Al-Warraaq written a book about the kinds of food and each kind with its advantages and disadvantages. He wrote a chapter of food table manners, written about perfect food according to season and weather, and so on.</p> <p>This book is an evidence about the development of food table in Abbassid period because of mixed culture espically with Persians that loved etiquette and from Turks they learnt how to use food tools like spoons, because all Muslims espically Arabs were ordered by Islam to eat with right hand. Pottery is the main equipment in addition to other materials such as copper. And some silver equipment such as cups and spoons.</p>	<ul style="list-style-type: none"> • More and more kinds of food, in addition to wheat and barley. • Mainly depend on the ways that need fire to prepare food. • Store is so important for food and cooking equipments. • Fixed place as kitchen in houses and palaces.
Late Ottomans Period	The food and its system come back to earliar Islam period; using pottery and cooper as equipment to prepare food. Using fire to prepare food by kiln made of clay. The place of kiln for preparing bread is usually on the roof. No fixed place for cooking as kitchen.	<ul style="list-style-type: none"> • Barley, wheat, rice in addition to date is the main food. • Storage is important to keep winter provisions, and invention of cold place to keep food fresh as refrigerator and keep it cold

Item	Cooking & Food	Result
	<p>The courtyard is the main place to prepare food. Family usually eats on the ground, while food is usually put high from ground on circular tables (an Islamic instruction).</p> <p>In occasions, usually men eat together and women together. Visitors must get good hospitality, and the owner usually doesn't eat till the visitors finish their eating. Food storage in basement in Takhtaboosh.</p>	<p>in basement called "Takhtaboosh".</p> <ul style="list-style-type: none"> • Mud kiln and stove is the main equipment for cooking. • Courtyard and roof are the main places for cooking. • No fixed place as kitchen in houses.



Table 7 Comparison Of Lifestyle/ Visiting

Item	Visiting	Result
Early Civilization Mesopotamia period	Families are closer with strong relationship. Good manners and customs, and strong neighborhood features. These concepts influenced the social structure that became like one family, so we find that visits are so common, daily, weekly, and occasional visits between relatives and social members.	Visits are so common in this period, according to the way of urban planning, and according to teamwork, and according to classes. Reception is a big place in house to receive visitors, as well as the courtyard as the other places for receiving visitor's especially family members.
Early Islam Abbasside period	Islam and other religions motivate people to be in more relationships, and visits are one way to increase the unity in social structure. Especially it is considered as one of the Islamic instructions between family member and family relatives, in addition to other religion occasions such as Islamic Fests, and other occasions like the night of Mohammad's ascension, and others. Development of lifestyle and mixing with other cultures produced luxury lifestyle based on social communication, pleasure and achieving wishes such as dancing, singing and so on.	Development of lifestyle and religion instruction causes modern kind of visit concerning visits, especially, occasional visits. It is the pleasure and amusement visit, between friends and trades, and so on. These kinds of visits motivate owners to care building beautiful and appropriate reception in their house, in palaces the big hall is for receiving visitors.
Late Ottomans Period	Gathering according to religion, tribe, and crafts, make districts are more vivid with strong relationships, it occurs daily between neighbors and friends, weekly between family members and according to occasions and monthly visiting, according to occasions and according to range of relationship.	According to kind of gathering, daily, occasional visits are so common, in addition to weekly and monthly visits according to Islam Instructions. Similar to other period's reception is the important part in house, to receive visitors. All comfortable means is must be found in reception.

Table 8 Comparison Of Lifestyle/ Sleeping And Sitting

Item	Sleeping and Sitting	Result
Early Civilization Mesopotamia period	<p>People in earlier civilizations used to sleep and sit on the ground and they put the skins of animals as mattress in winter and in summer they slept in the courtyard or on the roofs. Almost all other furniture was made of reed and papyrus. In Palace, it was different at least by the kind of mattress and clay or wood bench for sleep and sitting was used. No fixed places for sitting and sleeping.</p> <p>This kind of life is simple and not complex.</p>	<p>Sleeping and sitting on the ground, little furniture, mobile places of sleeping according to season and day time.</p> <p>No fixed bed room, no fixed living room. It is simple lifestyle.</p>
Early Islam Abbasside period	<p>The development of lifestyle according to economic situation, trade and culture, furniture became one of life requirements, that does not mean for all, of course many families still sitting and sleeping on the ground, while generally, best kinds of clothes used to make mattresses, blankets, pillows, and even as ornamentation on the walls. Furniture was made of wood and palm leaves. In palaces more luxury furniture was used, such as silk that brocaded with gold. And best wood furniture was used for visitors and throne of caliph. Usually fixed places for sitting and sleeping.</p> <p>This kind of life is complex and not simple.</p>	<p>Sleep and sitting on furniture, fixed places as bedroom and living room, in addition to moving according to season and time of the day for sleeping and sitting. It is developed and complex lifestyle.</p>
Late Ottomans Period	<p>Generally Baghdadi people used to sleep and sit on the ground, they used cotton, feathers, and wool to make their furniture such as quilt from cotton or wool, mattress from cotton, wool, and pillows from cotton or feather. They used palm leaves to make their furniture such as bed, chairs, and tables. There is no fixed place for sitting and sleeping, they were mobile places, according to season and daytime. The requirements of life forced us to fixed places. For example when we don't have bed, we can move our mattress easily to more comfortable places. This kind of life is simple and not complex.</p>	<p>Sleeping and sitting mainly on the ground with little furniture that made from palm leaves. No fixed place as bedroom and living room, it depends on season and daytime.</p>

Table 9 Comparision Of Lifestyle/ Occasions And Choices

Item	Occasions & Choices	Result
Early Civilization Mesopotamia period	In early civilization, the occasions were mostly religious attributes, ceremonies happened outside the house and near or inside temple. So the effect of occasions on design houses may not be found, The choices of color for dresses and interior house are according to class and economic situation. The public people dress usually dark colors, kings and leaders, as well as priests dress white color.	<ul style="list-style-type: none"> • Religious occasions are the common occasions. • Occasions were held outside houses usually. • Light colors for high classes and dark colors for lower classes, in each lifestyle parts, such as, clothes and interior colors.
Early Islam Abbasside period	In Abbassid period, more and more occasions were pointed, religious, social, and private occasions, the reception or big hall became important place to hold ceremonies, as well as the place for arranging these occasions. More development in using colors, as one of decoration elements. Caliphs and important persons, and his sons in occasions wear light colors brocaded with silver and gold. More colored clothes hanging on the walls as decoration.	<ul style="list-style-type: none"> • Social and religious occasions are common. • Occasions were held inside and outside houses. • Continues to select light colors for high ruling classes and dark colors for public classes.
Late Ottomans Period	In this period because of declining economic situation and poorness, the occasions were simple. Religious, social and private occasions were held such as, marriage, circumcision, the night of Mohammad's ascension, and the killing Imam Husain in the tenth of first month of Islamic calender (Moharam) and so on. The colors usually for marriage is white, and for kids in circumcision as well white, in Moharam, black was used as an expression of sadness and interior walls in part of house covered with black clothes.	<ul style="list-style-type: none"> • Continues to hold religious and social occasions but in simple way, and observe increase of occasions. • Continues to hold occasions inside or outside houses. • Continues to select light colors to express the wealthy and high lifestyle, and dark colors to express the public people.

Table 10 Comparison Of Lifestyle/ Studying And Education

Item	Studying and Education	Result
Early Civilization Mesopotamia period	The teaching is private for wealthy families. And usually for boys and non teaching for girls. Temple was the school before the school was established for teaching.	<ul style="list-style-type: none">• Teaching private to wealthy families.• Teaching for boys and not for girls.• Temple is school before schools esablishement.
Early Islam Abbasside period	Teaching is for all people and for both genders. First school had been established (Al-Mustansyriah), teaching in top level.	<ul style="list-style-type: none">• Teaching is for all people classes.• Teaching is for both genders.• Mosques, schools, and houses are the place for teaching.
Late Ottomans Period	Teaching is just to learn Qura'n and for boys only, and it is forbidden to girls. Usually the houses were used as schools in addition to mosques.	<ul style="list-style-type: none">• Teaching is for all people, according to economic situation.• Teaching is forbidden to girls, and allowed to boys to get religious education.• Mosques, tombs, and houses are the places to get education, in addition to other schools for other religions.

4.2 Comparison of City Scope and Urban Features

In this part of comparison, research will be compared with, three different periods, according to, urban planning design, that depends on nature of place, if it is planned to be geometric or organic, environment and social structure play role in this field. Moreover, for each kind of urban planning types, there are advantages and disadvantages. Road circulation reflects the neighbourhood factors and relationships between families reflect the means of transportations that was used in each period. Outside facade factor is more important in explaining design and lifestyle and reflects the solution of environment. Also materials told us about adapting to environment, and what kind of materials were used in houses - local or imported. On the other hand, the facade expresses the economic level of owners and power as well. Facade gives us information about the style that helps us know the period or era and architectural movement of building. Opening (doors and windows), windows, doors and gates are reflecting some details about the style, climate solutions, materials, proportions. House structure, the way of structure that consist of walls and roofs, the walls analysis, the texture, openings, ornamentation and decoration, roofs analysis give us the explanation of the spans and the way of roofing and if it is remain as local or use imported materials. Finally, the element of transportation determines outside circulation, and determines the relationship between district and the other, and determines the outside fences. In traditional building, especially in houses, more and more smart solutions are invented to be safe from weather, without harming it. These factors above will give as more information when using it. The comparison tables depend on pictures and architectural analysis to get lessons to apply in modern houses.

Table 11 Comparison Of Environment And Climate Effects On Formation Of Settlement And Use Of Buildings Materials

Item	Climate & Environmental Effects	Result
Early Civilization Mesopotamia period	Materials (clay brick/baked brick, papyrus, reed), thickness of walls direction toward inside, small openings/without, compact and organic urban planning, lane and blind alley, all these factors make us in my opinion that the houses were solved and treated environmentally although it is in primitive and simple way, and according to available material. These kinds of housing design translate the strong relationship with nature, the defect in these houses from environment is the ventilation, and it was poor or mostly not found. The author thinks because of they are farmers and spend all the time in farms is the main reason that they don't use windows in addition to fear, because they use the houses just for sleeping, even their kitchens were outside on roof or in courtyard.	Friendly houses to environment with simple and smart solutions, and so adaptable to environment and sustainable.
Early Islam Abbasside period	Baghdad is in golden era in this period, because of development in science, and it became the center of attraction for western and eastern students and for whom looking development. So, massive mixing between cultures arose, especially in crafts side, so the circular city of Baghdad were designed in modern way, in modern solution, in modern circulation, so we can't imagine there was no environmental solution, from where using courtyard, toward inside direction, using portico, iwans, thickness of walls, height of interior space, using fountains to refresh and moistening air, massive fences to protect from outside, scientifically all these factors are considered environmentally friendly solutions.	Buildings are adaptable to environment with developed and and smart climate solutions, and are considered friendly to environment and sustainable.
Late Ottomans Period	The environment was considered as the main reason to design houses in this period, so the relationship between houses and exterior is so	More and more concepts were applied to be highly adaptable to climate according to long extract

Item	Climate & Environmental Effects	Result
	<p>strong, and architects considered the gradual in hierarchical order for district, and houses had an integral system, and they thought that without the outside these traditional houses can't function correctly. In addition to materials, thickness of exterior walls, portico, Iwan, basement, wind catchers "Badguire", shanashyle, shade and shadow, and courtyard with its function, so all these factors are environment solutions, and these houses considered sustainable and green houses,</p>	<p>experience, and sustainable.</p>

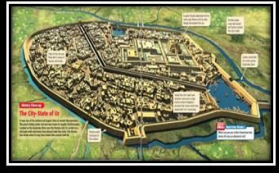
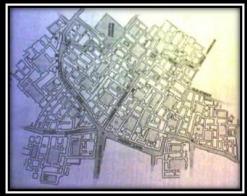



Table 12 Comparison Of Materials Effects And Adaptable To Climate And Environment Building

Item	Materials	Result
Early Civilization Mesopotamia period	<p>Materials are reed, papyrus, soil, and water, straw, sun/fire, and palm trunks and trees branches.</p> <p>The bricks were made by mixing soil, straw, water and putting it in mold to produce brick, finally using sun or fire to dry the clay. The brick that was dried by sun was for public and what was dried by fire was for palaces. There were different dimensions of brick in this period, such as 23.50 x 14 x 5-6 cm, 23 x 15 x 4-5 cm, 22.50 x 14.50 X 4-5 cm and 22 x 14 x 4-5, But the main brick dimensions were (23 x 15 x 3-5.50 cm, 20.50 x 13.50 x 4-6.50)</p> <p>In the roof, palm trunks and branches of tree were used then reed and then layer of palm leaves and finally layer of straw were used and paved with clay that was mixed with straw. The other kind of houses in this period was that both walls and roof were from reed and papyrus [65].</p>	Using local material, adaptation of materials to climate, different lifestyle with similar materials with different dimensions. Easy to recycle materials.
Early Islam Abbasside period	<p>A lot of forms and techniques had been developed and innovated in Abbassid period, in addition to use of local materials, Abbassid in opposite with Umayyad used mud brick and baked brick instead of stone, because there was no stone in Baghdad and Samarra' area, the builders covered and rendered the walls with gypsum plaster that sometimes painted, molded by using vegetal or geometric design, and craving [176].</p> <p>Two kinds of baked brick in Abbassid period were used, one with dimension 27 * 27 * 5 cm with using gypsum mortar to build houses and palaces, and the other one 46 * 46 * 11 cm with using mud mortar to build fences [179].</p>	Using local material in spite of high economic situations, materials adaptable to climate conditions, different lifestyle with similar materials, with different dimensions.
Late Ottomans Period	The main material to build is baked and mud brick, that in city, with dimensions, Farshi, 28 * 28 cm, Square, 19 * 19 cm, Thick, 28 * 15 cm, Sultani, 15 * 15 cm.). While in village, they used paste	Continuing to using local materials with little parts of imported materials. Materials are so adaptable to climate with

Item	Materials	Result
	<p>contained straw and soil with water, and it was made by tread by feet and built as Toff from 30-50 cm for each oca and wait till it dry, this was for the walls and the mortar material is also same paste from soil and straw with water or by using gypsum paste with water, for supporting walls to eliminate cracks they used stripe wood to put inside walls as an average twice for each floor that work as tie beam, or they use stone for twice as well as tie beam to support the walls. They use domes and wood for roofing. In addition, they use arabesque, wood, painting as interior materials [152].</p>	<p>ways of using them. Similar dimensions in materials.</p>

Table 13 Comparison Of Urban Planning

Item	Urban planning	Result
<p>Early Civilization Mesopotamia period</p>	 <p>Ur City Urban Planning, Sumerian Peiod [186].</p> <p>About 4500 years ago, Ur was the first city on the world with complex and sophisticated society. The city was divided according to the classes, in the middle there was the highest building Ziggurat, and king's palace, around them there were the priests and military leaders, then there was a defensive wall, then public houses with small temples [126].</p> <p>The residential area for public was cleared that generally each house contained courtyard, the rooms were divided around it in orthogonal way, lots of buildings were not uniform in size, outside the city there were slaves and farmer houses that were built from reed and papyrus.</p>  <p>Ur Organic Urban Planning District [186].</p>	<p>One center of city, ruling, government officers, and soldiers in the first fortification area. Public people, merchants, teachers, and crafts in second fortification area, and slaves/ farmers outside the fortification area in reed and papyrus houses. Organic urban planning.</p>
<p>Early Islam Abbasside period</p>	 <p>Circular Baghdad Master Plan, Abbasside Period [132].</p> <p>Caliph Abuja'far Al-Mansour established Baghdad about 145-165 A.H, the city was surrounded by a great fence contained four gates, the circle shape was divided from out to center, moat, jetty, first fence, first faction, second fence, second faction residential housing area, third faction, third fence, and in center the great plaza contained, caliph palace, great mosque, around theme located the palaces for</p>	<p>One center of city at first, and then established secondary centers according to extension of population and city. Two classes, ruling class and its collaterals in first fortification area of city, and public people in area between outside and inside fortification. Radial and circular urban planning in Baghdad, and organic urban planning in Samarra'.</p>







Item	Urban planning	Result
	<p>caliphs' minor sons palaces and state offices with two sheds one for man who responsible for guards and the other for director of the police.</p> <p>The public people houses separated from caliph and his collaterals by fence, in addition a lot of house were seperated by caliph himself according to the owner level and it is not equal in area. The two classes in this period translated in urban planning in lot of house and house location according to the center [132].</p>  <p>Mutwakkilyya Districts Urban Planing, in Samarra' [13].</p>	
<p>Late Ottomans Period</p>	 <p>Baghdad Urban Planning, Under Ottomans Period [39].</p> <p>In this period, the sections of district were established according to three kinds of gathering, first of all, tribe gathering, such as Hitawein district and Tikarta district, second of all, religious gathering such as Al-torah district for Jews, and Agd Al-Nassarah district for Christian, finally, according to the crafts gathering such as Al-Shaorjah and Al-Saffaren district, [37].</p> <p>Picture below represents one of heritage Baghdad district called (Sabunchiah), the courtyard was founded, organic urban planning, organic ways, and blind alleys.</p>  <p>Sabunchia District, urban Planning, in Baghdad [93].</p>	<p>Multi center of city, consist of mosque or bazaar, no fortification, fortification became in government building as massive fences. Private districts became common like, Judaism district, and Bab Al-Sef district.</p>

Table 14 Comparison Of Roads, Circulation, And Transportation Means

Item	Roads, Circulation, & Transportation Means	Result
Early Civilization Mesopotamia period	<p>According to the compact organic fabric style in Mesopotamia city the roads were organized as blind alleys, the concept of this kind of roads in that period came in an unintended way, it is indisputable at least in author's opinion, because of fear and divided city area under the principle of classes. As a result of this roads circulation of movement is organic and non-straight. This influence house in shape of lot mostly without right angles. In fact it had mutual affect, because the using area according to economy of owner produced organic roads as well as these organic roads and lots.</p> <p>Another reason is the transportation means that consist of animals, and boats, while cabs were private to high classes.</p>	<p>Primitive transportation means, organic roads inside and outside the fortification, with point to some wide roads in limited areas inside fortification, such as procession street in Babylon that faced Ishtar Gate.</p>
Early Islam Abbasside period	<p>The circular style of urban planning of Baghdad city produced circular circulation with radial road trends to the center that contain great mosque, caliph's palace and administration buildings with caliph's sons palaces. This was the Islamic urban planning that always lean toward the center that contain mosque, and bazaar, this pre planning site, just influenced the houses in lot area, it came according to economic situation, so richer people got huge area and near center, while poorer got small area and away from the center. Later in Samarra', came back the organic roads and organic urban planning. The transportation means were animals and boats, so these roads were fit to these transportation means.</p>	<p>Primitive transportation means, and radial and circular roads inside circular Baghdad, while organic roads and urban city in Samarra' and other districts outside Baghdad fortification.</p>
Late Ottomans Period	<p>The organic fabric in earlier nineteenth century, comes according to my study in Baghdad university as integral to Iraqi traditional house, because they thought that the organic roads and</p>	<p>Continuing to use primitive transportation means, organic roads and texture prevailed inside districts later opened wide streets to</p>

Item	Roads, Circulation, & Transportation Means	Result
	<p>circulation make rarefaction in air pressure and that makes air in continuous circulation reducing heat in Summer. In addition, author thinks that it came according to use of area in similar way of Mesopotamia period but in this time the lot area was not imposed but according to economic purpose, because people in that period suffered from hard economic situation, moreover this kind of organic because of the three kinds of gathering (religious, tribes, and crafts) affected the urban planning in this period. The same transportation means animals and boats, so this organic road fitted to their means.</p>	<p>be fit to new transportation means “Gari”.</p>

Table 15 Comparison Of Buildings Facade

Item	Facade	Result
<p>Early Civilization Mesopotamia period</p>	<p>Fear and climate were two reasons that affected architects and crafts to design houses toward inside, and let the elevation solid walls without any details except gates as entrances, even in kings palaces the elevation were solid except putting monuments like lions or winged bull in each side of palace gate. Almost all elevations were solid with massive walls (1-3 m width), as defense element from enemies.</p>  <p>Babylon City, exterior walls [20].</p> <p>While in Babylon city we see some ornamented animals in walls to represent the power of king and city and we can see retreat wall in harmony way, in addition gradually of parapet toward sky.</p>  <p>Ornamentad Anemales on brick on exterior walls in Babylon [20].</p>	<p>Little known about old houses in fortification, however, solid facades prevail in general way with decoration by using animals in palaces, and gradually of parapet toward sky.</p>
<p>Early Islam Abbasside period</p>	<p>To express about luxury and development in architecture, the art of Islamic architecture was so flourishing, so all the exterior walls were ornamented by using Islamic elements such as, inscription letters and Qur'anic verses, arabesque, stalactites, domes/cupolas, vaults in kinds of semi-circular, pointed arches, horseshoe arches, and lobed [95].</p>  <p>Facade of Cilaphat Palace, Baghdad [3].</p>	<p>Solid exterior facade continues with Islamic decoration such as, calligraphy, molded ornamentation, brick decoration, etc.</p>



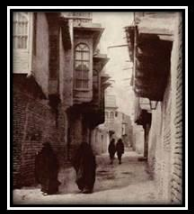
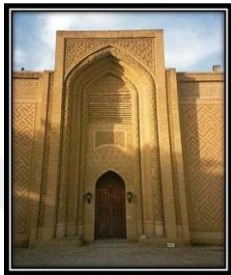
Item	Facade	Result
	<p>The direction of palace was toward inside where courtyard was surrounded with portico, but we can imagine the luxury of life by ornamented the exterior solid walls and massive columns on corners, and huge decorative gates.</p>  <p>Facade of houses in Samarra' using molded decoration in exterior walls [176].</p>	
<p>Late Ottomans Period</p>	<p>Smooth, closed and simple walls were the elevation of traditional Iraqi house and not permeation of the walls except gates [152]. The street elevation was solid on ground floor but on first and second (if found) the walls ornamented with (Shanashyle), that it is prominent windows made from wood and contains colored glass.</p>  <p>Exterior facade in traditional houses, Baghdad [41].</p> <p>It is used to make people who were inside see outside and prevent people who are outside seeing inside, to give more privacy to family members. In addition wind chimneys appear in elevations that were used for cooling houses spaces.</p>  <p>Exterior facade in traditional houses, Baghdad [112].</p>	<p>Ottomans affected the exterior facade, “Shanashyle” that is similar to “Mashrabiya” appear, and wind chimneys for cooling system, also common as Persian and Ottomans effects</p>

Table 16 Comparison Of Gates To Fortification Entry, Palace Entry, And House Entry

Item	Gates To Fortification Entry, Palace Entry, And House Entry	Result
<p>Early Civilization Mesopotamia period</p>	<div data-bbox="528 342 783 562" data-label="Image"> </div> <p data-bbox="523 566 994 622">Ishtar Gate of Babylon city (575 B.C), in Berlin Museum [128].</p> <p data-bbox="523 663 994 875">The interest of gate is important to represent the power, development, and considered as a monument for city, in addition as main and exclusive entrance from outside fortification to inside.</p> <p data-bbox="523 882 994 1097">Ishtar Gate represents the power as feral animals were ornamented such as lions, and massive building represented the development and power as well. In general doorways were: Semi-circular arches.</p> <p data-bbox="523 1104 994 1205">With glazed bricks around the circumference. And Parapets towards the sky</p> <div data-bbox="528 1211 815 1395" data-label="Image"> </div> <p data-bbox="523 1400 983 1487">Two Winged Bull (750-721 B.C.), Louvre Museum, in front of Assyrian Palace entrance [154].</p> <p data-bbox="523 1527 994 1630">Entries of public houses were simple and consist of one shutter, because of fortification gates.</p>	<p data-bbox="1018 342 1406 595">Fortification gate is first level of importance, then palaces gates in second level, because the high protection principle are common, so public houses are not the concern of house portal.</p>
<p>Early Islam Abbasside period</p>	<div data-bbox="528 1641 791 1776" data-label="Image"> </div> <p data-bbox="523 1780 994 1901">One of fourth Circular Baghdad Gates, Al-Bab Al-Wastani/Bab Khurasan, (762-768 A.D.), still standing till today in Baghdad [112].</p> <p data-bbox="523 1942 994 1998">We can observe the massive building with iwans in both side of</p>	<p data-bbox="1018 1641 1406 1890">Continues high level of protection, and starts with fotification of gates and then palaces, this priciples make people not concern with house portal, so it was simple and consist of one shutter.</p>

Item	Gates To Fortification Entry, Palace Entry, And House Entry	Result
	<p>entrance; this gate represents the luxury and power of Abbassid state. Arches, massive walls, and gradual fence headed toward sky. In palaces we observe, the ornamented gate of caliphate palace is representing the luxury and the huge scale represents the power, in addition the gradual toward interior of using arches to give kind of welcoming and represent thickness of walls.</p>  <p>Cilaphat Palace gate, Baghdad [3].</p> <p>Similar to Mesopotamia period, massive fortification gates and large palace gates, while public people houses consist of one shutter.</p>	
Late Ottomans Period	<p>From the Mesopotamia period across Abbassid period, we observe the similarity of using gates in palaces and fortification gates, so public people form them to feel the sense of safety, their houses consisted or made of one shutter, while we observe in late Ottomans period, when fortification moved from city to massive fences for palaces and government buildings, what made public people think to make strong gates to protect themselves, the houses entries comes to imitate the gates of palaces but in human scale.</p> <p>The outside facade in ground floor is solid and never have any details except the main house entry, the entry represent the human scale, more ornamented frame, and</p>	<p>Developing principles of protection, with non-fortification gates, extensions of cities, transmitted protection principles from city fence and palaces to government protection, this made people concern on houses portal and imitate the massive gate, but in human scale.</p>





Item	Gates To Fortification Entry, Palace Entry, And House Entry	Result
	<p data-bbox="523 271 995 338">gradually toward interior, and using blind arches.</p>  <p data-bbox="523 640 995 707">Entry of traditional house in Baghdad (Researcher)</p> <p data-bbox="523 770 995 913">The doors made from two shutters usually and it is between 1.20-1.40 m., the entrance is not direct to give more privacy for family.</p>  <p data-bbox="523 1155 995 1238">Two Kinds of entries of Traditional Iraqi Houses, using arche and non-using arch, in Baghdad, (Researcher), [112].</p>	

Table 17 Comparison Of Extrnal Features/ Windows And Voids

Item	Windows	Result
<p>Early Civilization Mesopotamia period</p>	<p>There is no evidence of using windows or opening in houses in Mesopotamia in real meaning of window, so houses were not well ventilated, rooms were dark and damp, some houses had very small openings and high up in the wall, because of the climate, and fear from wars that always threatened Mesopotamia, even here there was none proper ventilation, while in palaces. After the invention of the glass from sand, they used glazed opening in wall and it was square-headed and high up in the wall. Or pointed arch as it was shown in cylinder stamps (Reed built houses) (International World History Project, 2007).</p>  <p>Windows in Reed and papyrus houses, Mesopotamia Period, [137].</p> <p>As well as in marshes in southern of Iraq that till now it's used, these windows are interlaced mesh from same materials reed.</p>  <p>Windows in marshes houses, South Iraq today's [165].</p>	<p>Small holes, in palaces, non-windows in public houses, bad lighting and ventilation.</p>
<p>Early Islam Abbasside period</p>	<p>According to the climate the windows were not founded, in almost palaces there is no windows just small openings above the door for ventilation, we can find it in caliph's palace in Baghdad, the climate affected the crafts and designers in avoid openings in spaces, especially when they didn't have glass. While later especially in Spain Muslims used colored glass in windows and ornamented with Muslim patterns, the development of industry, especially the glass opened the way for thinking with openings.</p>	<p>Small halls in palaces and houses facing courtyard, later glass windows in Spain, bad lighting and ventilation.</p>

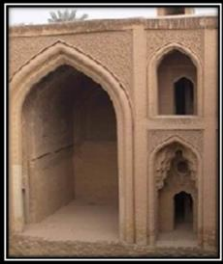



Item	Windows	Result
	 <p data-bbox="528 517 1070 577">Window as small hole upper the door, in rooms of Caliph palace, Baghdad [3].</p>  <p data-bbox="528 808 1070 864">Windows with color and ornamented glass, Muslim arts in Spain [44].</p>	
Late Ottomans Period	<p data-bbox="523 875 1088 1597">As we mentioned above, there were no openings in exterior walls except Shanashyle in first and second floor. And these kinds of openings were used to prevent the viewing from outside while allowing to whom inside to see the exterior as a kind of privacy in Iraqi traditional houses, the Shanashyle were located in harmonious ways, and sometimes in overlapping way, in addition, its organic structure comes from where adjustment and modification wrong angled lot. The windows that facing courtyard mostly small in rectangular or square shape to get light. The opening in the windows toward interior and facing courtyard, these windows were usually protected from direct sunlight with portico, so it provided lighting and ventilation to prevent luminosity.</p>   <p data-bbox="523 1812 1046 1897">Shanashyle, exterior windows facing streets, in traditional Iraqi houses (Researcher), Interior windows, facing courtyard (Researcher).</p>	<p data-bbox="1110 875 1407 1155">Exterior windows with decoration shape “Shanashyle” and interior windows that were protected with portico, with good lighting and ventilation.</p>

Table 18 Comparison Of Structure Of Houses

Item	Structure Of Houses; Walls & Roofs	Result
Early Civilization Mesopotamia period	<p>Houses usually depended on bearing walls that were usually formed by baked/mud brick. The walls were usually solid with small/non windows and thick walls.</p> <p>In Mesopotamia they used three kinds of roof, first of all, they used vault walls that continue wall curving in top and forming the roof like marshes vaulted houses by using reed and papyrus. Second of all, the roof that was made by using beams of wood or palms trunks then, they put mat made of reed or papyrus, then put layer of straw and finally paved its top by using paste consist soil and straw, the vaulted roof of brick especially used in king's palaces.</p>	<ul style="list-style-type: none"> • Houses and palaces depended on bearing walls of structure way. Walls were usually solid with coarse texture in houses, and small/non windows in walls, with thick walls. • The roof is vaults, wood or palm trunks beams paved with mud.
Early Islam Abbasside period	<p>Similar to Mesopotamia period, bearing wall is the way of building houses, by using baked/mud brick. Walls were solid and ornamented with brick with small/no windows, and thick walls.</p> <p>Domes and vaults were the main way for roofing in addition to using palm trunks for public houses. In general they used gypsum mortar to build houses of the rich and for palaces, although they used mud mortar to build the fences because of the width of fences that need more mortar and they just depend on hand way by break and crush limestone to get gypsum mortar. In addition the wooden roof that depends on palms trunks and imported kind for riches.</p>	<ul style="list-style-type: none"> • Continues to use bearing walls for house structure, solid and smooth texture, with small/non windows, and thick walls. • The roof is vaulted, domes is the main way for roofing, in addition to use wood and palm trunks for roofs.
Late Ottomans Period	Continues to using bearing walls as the main way for building	<ul style="list-style-type: none"> • Continues to using bearing walls, solid walls in ground

	<p>houses, walls appear solid in ground floor, while “shanashyle” appear in first floor, and use thick walls.</p> <p>At the first the wood or palms trunk were the main way of roofing, and paved with paste of soil and straw with water, and they paved the top of roof that what became floor for the first floor by using paste of gypsum, when British succeed over Ottomans, new materials were imported to Iraq, like iron that play a role in roofing by use iron (I section) with brick.</p>	<p>floor, and ornamented with “shanashyle” large windows in first floor, walls thickness (36-48 cm).</p> <ul style="list-style-type: none"> • Vaulted, domes, (I section iron with brick) and wood or palm trunks beams.
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4.3 Comparison of Interior and Plan Layouts of Houses

In this part of comparison, research will compare with, three different periods, according to materials, that are told as what is local and what are imported materials, in order to determine the vernacular and traditional houses. Style of design is the second element in this part of comparison telling receiver about the era or period and time of build, as well as giving information about the influences from local or exterior cultures. Roofs and grounds, the third element to compare with, give us information about structure of houses, kind of material, and tradition or modern technique. The fourth element is the decoration and ornamentation, this factor explains the function of spaces, give us information of building nature, like if it was built for needs or wishes. Ornamentation explains the style, architectural movement, and class of owner. Plan is the final element of this part of comparison which give us more and more information about several things such as orientation, environment solutions, measures of spaces, explanation of the relationship between the fence and entrance. Plans give us information about style, kind of family structure, as well. In addition to other thoughts, concepts and so on, that we can touch it through the analysis.

Table 19 Comparison Of Interior Features/ Style




Item	Style	Result
<p>Early Civilization Mesopotamia period</p>	<p>Mesopotamia style can be considered pure and not influenced by any style, and the first style of building at least for Iraq architecture history, it comes to represent needs of their lifestyle, characterized by, indoor direction, using rectangular plans, use local material (soil, straw, and water), defensive fences, thickness of exterior walls (3-3.5 m), between weather denudation and fear from enemies, thinking again in a new way, so they doubled the thickness of walls, buildings surrounded with fence, raising the building from the ground level, and discovered the courtyard. Using columns standing on the wall, first using of portico, defensive gates from lead and non- direct passageway. The palace of king consists of house for the king and his family, court, large hall to receive visitors and people, workplace, and administration spaces. It is differing from the other houses in size and height (no human scale) with same materials, as well as differs in some decoration in some parts [167]. All in all, the style represents the simplicity of lifestyle according to needs not to wishes.</p>	<ul style="list-style-type: none"> • Pure and first Iraqi architecture style. • Style is representing needs. • Style is based on defensive concept and inward direction. • Style based on using local materials. • Style is expressing the friendly dealing with climate to create sustainable environment. • Style represents the simplicity of lifestyle.
<p>Early Islam Abbasside period</p>	<p>Abbassid style was influenced by the Sasanian and Arts of Asia Minor and the former of Umayyad art. The influence appears in, using brick (Ager) as local material instead of stone, gypsum ornaments instead of stone ornaments, rectangle plans in almost all buildings, using pointed arch plus the semi-circular, watching towers influenced by Sasanian style, multi-gates were influenced by Mesopotamian style, using abutment instead of columns. And Innovation style floral abstract away from nature (Style of abstraction) [131]. As an evidence of elegance of Abbassid style, when a Byzantine envoy went to Baghdad in 830 A.D, he</p>	<ul style="list-style-type: none"> • Developed style according to mixing with other cultures, • Style is based on defensive concept and inward direction. And represented wishes in addition to needs. • Using local materials is one of basic elements of style. • Style expressing the development with dealing with climate to get green environment. • Style represents complex and

Item	Style	Result
	<p>was so impressed by the splendor of Abbasid architecture, so when he returned to Constantinople, he persuaded Emperor Theophilos (829-842) to build a palace exactly like the ones he had seen. Theophilos complied, and a palace was built at Bryas, now Maltepe, on the Sea of Marmara, although Byzantium and Abbasside were religious and political rivals [176].</p>	<p>developed lifestyle.</p>
<p>Late Ottomans Period</p>	<p>In this period it again returned to the start point, because of the wars and occupations, although they had heritage extending from Mesopotamia period through Abbasside eras, till Ottoman occupation. The style of building got more and more impacts, in spite of keeping basic themes and concepts.</p> <p>There were several factors that influenced the style, such as destroying circular Baghdad, firing and stealing from libraries, occupation, starvation, injustice, fear from future, etc. these elements changed huge part of culture and lifestyle system, changed social environment, so, the style depended mainly on courtyard, as heritage element and according to time need, indoor direction, solid exterior elevation, interior elevation around the courtyard, basement as cold store and for sleeping in Summer noon (climate treatment), not direct entrance to get privacy, not fixed place for function , for example they slept in the basement at noon, and on roof at night, and in rooms in winter, no specific place for sitting, because of environment, and according to visitors [15].</p> <p>New two elements appeared as effects of Ottomans and Persian, “Shanashyle” and “Badguire”</p>	<ul style="list-style-type: none"> • Developed style according to mixing with several cultures. • Style based on inward direction, and represent needs • Style is based on using local materials, and small parts of imported materials, such as iron. • Style expresses the smart ways of dealing with climate to creat the suitable environment. • Style represents simplicity lifestyle with smart ways of climate solutions.

Table 20 Comparison Of Interior Features/ Floor Finishing

Item	Floor Finishing	Result
Early Civilization Mesopotamia period	Public houses were paved the grounds with paste of soil and straw, while in king's palaces they used baked brick and filling with lime, or just paved the paste of soil and straw with bitumen and lime to control damp especially in kitchen and baths.	Primitive ways of paved floors, and depended on local materials. Little developed way of using bitumen and lime to prevent damp in baths.
Early Islam Abbasside period	Paved brick is the main way for covering the grounds, while in some palaces there were ruins of glazed brick that refer to use of it in some places especially in palaces, they use bitumen as filling mortar for joints, while using gypsum mixed with bitumen as mortar to pave the grounds.	Developed ways of paving floors, started with backed brick with filling joints with bitumen mortars. And later uses glazed brick in some palaces.
Late Ottomans Period	At the beginning they used (farshi 30 * 30 cm) brick to pave the grounds, with lime and bitumen, while they used mosaic tile to pave the grounds later and mainly its color were white, yellow, red, and blue colors. The baths were always paved by using bitumen [152].	Continues to using brick to pave floors, and later they paved the floors with mosaic tile with four colors, white, yello, red and blue.

Table 21 Comparison Of Interior Features/ Walls Finishes, Ornamentation And Decorations

Item	Walls Finishes; Ornamentation & Decorations	Result
<p>Early Civilization Mesopotamia period</p>	<p>There are several kinds of decoration in ancient Mesopotamia, First of all, using the brick with different situations, like in chamber (45) in Kish palace. Second of all, using pottery. Third of all, using Stucco and bitumen for decoration and as waterproof plus wainscot. Fourth of all, using glazed brick. Finally, using the sculpture tablet [65].</p>  <p>Glazed brick from Sumerian period, covered walls and columns [65].</p>  <p>Ornamentation on glazed brick, on throne hall wall in king Nebuchadnezzar palace, Babylon Period [59].</p>  <p>Wall decoration by using Pottery, Sumerian Period [65].</p>	<p>Primitive and developed (blue glazed brick) ways of decoration but in some parts of palaces. While in house there is no decoration. Decoration represented power.</p>
<p>Early Islam Abbasside period</p>	<p>“The Abbasid style of molded stucco decoration, which combined late anti practical innovation was transformed into an aesthetic one, as builders throughout the Abbasid lands adopted this type of stucco revetment” [176]. Calligraphy, sculpture, painting, using clothes, wood, colored glass, vegetal ornamentation,</p>	<p>Developed decoration appears in interior and exterior walls, special style developed that used to decorate large walls with molds. Decoration in houses and palaces. To represent high lifestyle.</p>

Item	Walls Finishes; Ornamentation & Decorations	Result
	<p>Stucco decoration, Samarra' first Muslim Style [176].</p> <p>Molded Stucco, Walls decoration, Samarra', Third Muslim style [176].</p> <p>Wall painting in (Harem) from Dar Al-Khilafa Palace, Samarra' [176].</p>	
Late Ottomans Period	<p>In this period, the decoration was made by using, wood gypsum, brick, and painting. The wood appears in wall decoration, columns heads, doors, windows, and grills. The gypsum appeared in Muqarnass, walls and ceilings ornamentation, on the gates, and corners. Brick appeared in using brick in different angles, and in muqarnass. And painting appeared in walls and ceilings.</p> <p>Gypsum Window Detail In Zubaidah House In Baghdad, And Ornamented Ceiling Entrance In House In Najjaf [152].</p>	Several kinds of decorations were used in some parts of houses, such as, gates, reception, decoration is to show and represent the influenced with other cultures.



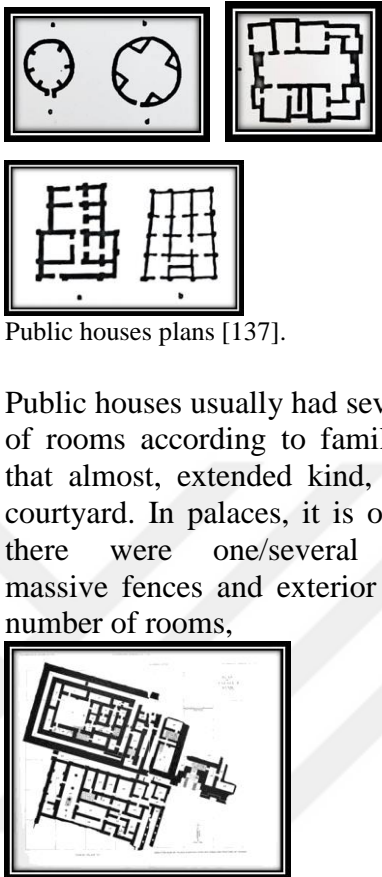
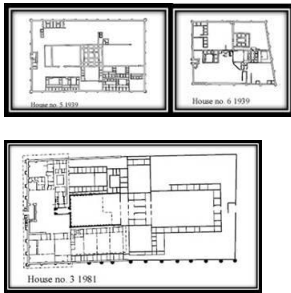
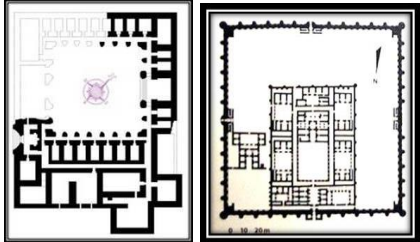
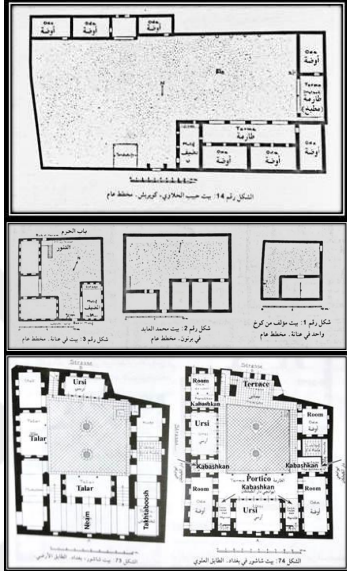
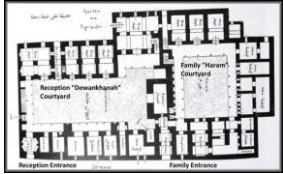
Item	Walls Finishes; Ornamentation & Decorations	Result
	 <p data-bbox="523 629 946 689">Brick decoration, in Shaol house, Hilla [152].</p>  <p data-bbox="523 929 1010 990">Wall and ceiling painting in reception, wealthy house Baghdad [152].</p>	

Table 22 Comparison Of Interior Features/ Plans

Item	Plans	Result
<p>Early Civilization Mesopotamia period</p>	 <p>Public houses plans [137].</p> <p>Public houses usually had several number of rooms according to family structures that almost, extended kind, uually one courtyard. In palaces, it is observed that there were one/several courtyards, massive fences and exterior walls, large number of rooms,</p> <p>Kish Palace plan, Sumerian Period [65].</p>	<ul style="list-style-type: none"> • Courtyard is the main concept of houses and palaces, inward direction, multi gates in palaces • Simple houses and developed palaces. • Non direct entrance for privacy. • Use portico to employ shade and shadow. • Plan shape was usually rectangle, with square shape in some houses.
<p>Early Islam Abbasside period</p>	 <p>Public houses plans [13].</p> <p>Public houses were usually large with more than one courtyard, with large number of rooms, in addition to other houses that consists of one courtyrad. In palaces, we observe the massive fences, massive structure, large number of rooms, and large number/one courtyards,</p>	<ul style="list-style-type: none"> • Continues to use courtyard as main concept of house plan, with inward direction. • Developed houses and palaces. • Non direct entrance for privacy. • Use portico to employ shade and shadow. • Use iwans for sitting in different time and season. • Mostly plans in rectangular shape. • One/ more than one gates in palaces, while

Item	Plans	Result
	 <p data-bbox="523 488 1070 555">Cilaphat Palace plan in Baghdad [3], and Ukhaidir palace plan in Holy Kerbala' [91].</p>	<p data-bbox="1155 248 1407 315">houses with one portal.</p> <ul data-bbox="1145 327 1407 506" style="list-style-type: none"> • Small and large rooms according to function and furniture.
<p data-bbox="300 591 501 658">Late Ottomans Period</p>	 <p data-bbox="523 1160 810 1193">Public houses plans [152].</p> <p data-bbox="523 1223 1070 1368">In public houses we observe, the courtyard, and small/large number of rooms according to kind of family structure.</p> <p data-bbox="523 1406 1070 1552">In palaces or large houses, it is observed that house consists of two courtyards, large number of rooms, and massive house structure.</p>  <p data-bbox="523 1787 1070 1841">House in Baghdad, owner is wealthy person, not it is hotel [152].</p>	<ul data-bbox="1107 591 1407 1738" style="list-style-type: none"> • Continues to use courtyard as main concept of house plan, with inward direction. • Developed houses and palaces. • Non direct entrance for privacy, with concern on entrance. • Appeared new parts in houses such as, “ursi”, basement, “badguire”, etc. Because of influences of other cultures, like Ottomans. • Use and employ portico for shade and shadow. • Plans were usually in rectangular shape, with some square plans. • Small rooms according to furniture.

4.4 Common Architectural Features of Iraq through All Three Periods Which Represents the Iraqi Identity

The features of Iraqi architecture is based on simplicity principles, because it depends on simple way in building that is not complex, it aims to represent the need more than wishes, it is functional architecture more than show off. Iraqi architecture is concerned with dealing with environment in a deep way to create comfortable environment for users. The creation of Iraqi architecture is hidden in representing the lifestyle in each details in houses, and in using local materials and how to employ its features to deal with environment. Below is what research determined of Iraqi architecture features:

1. Neighborhood is basic element of influence in city planning and in house planning as well, closer houses to each to other are preferred to traditional urban planning.
2. Classes are the element that determine the situation of human in social structure, compression shows us the classes through the three periods. It is founded even in Islam period that stand against it. Classes divided people, and affected their relationship, and gathered to settle, influenced the lot of house, size of spaces, the situation according to the center of city, range of benefits from services, decoration, kind of materials and represented the human scale.
3. Organic urban planning is a trend, for more relationships with environment to create suitable climate and between families. Because lifestyle tend to lead to more communication.
4. Lifestyle, is based on simplicity, not complexity, require simple equipments, that affect the design of house in form and function to be more simple.
5. Inward direction is used instead of outward direction according to environment and for more privacy.
6. Use shade and shadow in houses to make different interior places to use houses in different time and season.
7. Concerning the main entrances, as important thing in exterior facade, because it is point moving between interior and exterior. Broken entry is the unique feature in entrance to prevent direct sight toward courtyard.

8. Using small windows and the reason they must be shaded is to take light without direct sun and as an environment solution, and finally for more privacy. In addition to use “Shanashyle” which located in exterior facade
9. Iraqi architecture is affected by and affected the environment, traditional houses were designed according to environment, horizontal and vertical movement according to daytime and season, that means mobile spaces. Generally, traditional Iraqi houses are more suitable and comfortable in Iraqi environment.
10. Important features in Iraqi architecture that are using local materials such as mud/backed brick, wood, and palm trunks, for it is more sustainable, green, and suitable to the climate. In addition, it gives the expression of identity and roots of place. Moreover, more crafts have experience to use it in multi-ways.
11. The style of Iraqi Architecture is in the main way, inward direction, because of environment as the top reason, and for privacy, as secondary reason. Using brick is a unique feature, and mud as well especially in villages. The simple style may be according to Islam and according to economic situation, but in general traditional houses are carrying simplicity principles. The other important thing is dynamic style, because it looks for strong relationships, so the districts are full of life and movement, it is a live district, not dead districts. The style never changes in general, while the changes or developments are just in secondary parts, such as decoration, human scale in palaces, kind of arches, and way of decoration that expresses show off, power, high economic situation, developed lifestyle, and greatness.
12. Iraqi architecture is concerned about reception because of the nature of society that builds on strong relationship. And visiting during day, month and week are frequent, in addition to the occasions that are usually held in houses motivate owners and designers that concern about the reception that must be large space in houses and being near entrance.
13. Iraqi architecture is concerned about the environmental solution, because of heat climate in this region, environmental solutions appear clearly, by using; courtyard, basement, moving through spaces during day, and season, and using portico,
14. Using portico to make kind of shade and shadow, that they employ it to reduce heat in places that they use it.

15. Plans usually take rectangular shape, using one or more courtyard, similar rooms are located around courtyard, broken entry, no fixed space name in plans, the use depends on daytime and season.
16. Important iraqi architecture feature is adaptable to environment.
17. Using and employment of “Iwans”
18. Using fountain in the middle of courtyard for refreshing air in summer.
19. The influence of religion on houses are non- obvious, through three different periods.
20. Through three different periods Iraqi architecture has been sustainable and green houses.
21. The identity of Iraqi architecture clearly appear by using the elements, such as, courtyard, portico, iwans, fountain, broken entry, solid facade in ground floor, inward direction, use of local materials, and using arches (semi-circular, pointed, and lobed arches). These elements represent the pure Iraqi identity, while there are other elements that appear according to the influence of other cultures such as Persion, and Ottoman. These elements became a part of Iraqi identity as the years pass but remains hybrid, such as, Basement, Ursi, “Badguire”, “Shanashyle”, and “Kabashkan”, and so on.
22. Decoration, ornamentation, and arts appeared through three different periods in different shapes, such as relief, painting, animal and fantasy monster monuments and statues, pottery, clothes, wood, brick ornamentation, “Muqarnass”, stucco, calligraphy, vegetal ornamentation, and gypsum decoration.

CHAPTER 5

DISCUSSION AND CONCLUSION

5.1 Discussion

5.1.1 New Urbanism

Traditional urbanism and its features motivate people who are concerned about urban planning to go back and learn from traditional urban planning concepts, that because it confirmed its sustainability, as green houses and urban planning, as healthy areas, and as low energy in use.

The new urbanism movement that concerned and focuses to;

“respective new traditional innovations as a significant break from the automobile-centered landscapes of suburbia in favor of a compact pedestrian friendly design that incorporates a mix of people and activities that make for vibrant urban places” [67], [80].

New urbanism calls on garden city model of master planned communities [107], and calls for neighborhood unit theory, [155], in addition, it emphasizes human–environment interrelationships [134]. Moreover, when charter of the New Urbanism Congress for the New Urbanism (1996) described 27 principles to define new urbanism, the important these principles are [80];

- New traditional esthetics that is sensitive to local, architectural styles, building materials, and history.
- A higher density in built environment that incorporates or allows for multimodal transportation and walking, in particular.
- Land use policies that enable a mix of nonresidential land uses, especially civic and open spaces, as well as multiple types of housing that together create a demographically diverse place.
- Sensitivity to the environmental impact of development and an effort to promote environmental conservation and increase regional density.

The theories above support the research to re-use the traditional urban planning, and re-employment of the relationship between neighbors in order to built vivid

environment, with strong relations and communication between each other, and to decrease the gaps between societies to get sustainable of community relationship [75], They enhance sustainability of community and decrease social segregation of income groups.

Seaside, Florida is well-known example for new urbanism, in terms of the land use planning philosophy that supports the development of compact, mixed-use, pedestrian-friendly communities, and they planners depend on two kind of urban design that called, TOD, and TND, that mean (built around a mass transit station, so that residents can walk to the station and commute to work), as well as it is

“A mixture of uses and housing types with commercial uses clustered in the town center, well-designed, centrally-located parks and other civic spaces, small lot sizes with narrow frontage and the garage pushed to the rear of the lot, sidewalks, street trees, and a variety of other design elements intended to treat the streets as outdoor rooms and make it pedestrian-friendly. Narrower streets in a modified grid with more frequent intersections are safer and more pleasant for both pedestrians and drivers than a system of collector roads and cul-de-sacs” [77].

New Urbanism, like Modernism, rejects a part of the legacy of urban planning, thus rejecting the recent past. In particular, it condemns the way cities have been planned in the twentieth century. To a substantial extent, it has involved evoking an idealized past, a past that never was and that is, in fact, a modern-day creation that has emerged in close association with and in response to the processes that have been bringing Historic Districts into being. A very important aspect of the New Urbanism has been what is referred to as the “rediscovery of old communities”, (Learning from the past). The center should be a public space, a square, a green or an important street intersection. Innumerable Historic Districts are focused on squares, greens and parks. “the optimal size of a neighborhood is a quarter mile from center to edge”, “The neighborhood has a balanced mix of activities – dwelling, shopping, working, schooling, worshipping and recreating”. Again this is a feature of the older Historic Districts as emphasized in the walking tour guides, [75].

From above the research conclude and concern to use and encourage this kind of urban design from where healthy side, decrease pollution, sustainable, building,

multi uses of land, that consist, residential, tradition, amusing, and using open areas as landscape and green areas.

5.1.2 Courtyard

Through three different periods, receiver observed the courtyard is hallmark of plans of houses and palaces, in spite different religion, different thoughts and different ideas. The courtyard is an environment solution in main concept, in addition to giving privacy for users by preventing the neighbors from looking at each other. And it is not to separate women from men, according to almost that think that especially, Raya, (1989), think that courtyard in almost Arab houses is according to religion in order to separate women from men [163], and Erpi (1991), believed that all Muslim houses are similar because of that islam is men world, and women stay in house, according to religion [83]. Author disagree with them, and have reverse approve, because first of all, in Rome and Greek similar houses contained courtyard, [6], [172], and [21], secondly, through three different period, with different religion, they were use courtyard, finally, in Abbasside period, women got more freedom, and they became work outside house and they got teaching, while houses never changes, in addition to Abbaside palaces, in period of high development and mixed culture with others, while courtyard remain the hallmark in plans, so this is and evidences that courtyard is belong to environment and not belong to religion had been invented, in addition it is founded from earlier civilizations.

5.1.3 Environment

Importance of specified to designer is environment, especially, in these recent years, with the great problem of global warming. Almost all companies are looking for alternatives for energy, especially in houses new concepts formed such as, green, sustainable, smart, houses energy zero, friendly environment, and so on. In the same way, most architects, encourage each other to for word back to re-use traditional design and material that improve that traditional houses are so suitable and never harm environment from side. It is healthy with low energy, and comfortable for users, from other side, and the evidence that these houses age more than one hundred years and it is work till today. From author's opinion, with the speed of technology

we need to use it and some part of house, while support to use local materials that is really and approved it is suitable to its environment, for example the mud is so cheap and so suitable for Iraq environment, while we need to use it as isolation because it is exposed to corrode. The dealing with environment need deeply study of materials nature, because in Iraq now, almost owners, try to apply each modern materials in his house, because he think it is represent about his modernity and high lifestyle (love of show off). For example using (A. C. P.) to cover houses facades, and in heritage areas, this kind of work is not suitable to Iraq environment as well as it is not suitable in traditional cities. In additional it is not local material. This work makes to deform the façade of heritage cities.

From where the climate and privacy, courtyard houses are so famous in hot and dry climate [16], so we can find it in heritage civilization in Mesopotamia in Sumer, [109], [150], [183], in early Islamic architecture, especially in Abbasside period, in traditional of Iraq, Turkey, Syria, and Iran. These traditional and heritage houses, are designed according to culture and lifestyle, according to needs, according to thoughts, and as artificial environment. These traditional houses have movements around courtyard as horizontal movement, and from basement to ground floor to the roof, as vertical movement, according to day time and according to seasons, [6], [171], [17], [18], [136], [158].

The form of houses is result of culture environment, and the organization of house is a result of socio-cultures factors, such as habits, as well as the social and family structure is very important elements of culture that influence the house and artificial environment [160].

Respecting environment is one of Iraqi traditional architecture feature, and it represents the socio-culture elements. Traditional Iraqi houses, reflected almost factors and elements of social and family structure, and reflected the relationship with environment in developed and smart way with local materials and with simple solutions. Using broken entry and inward direction with using “Shanashyle” were smart solutions to give more privacy that users looking for its. Using courtyard is another smart solution to get privacy and deal with environment, courtyard that give users the connection and continuity with sky and outside with protection from the

exterior climate by creating comfortable climate depends on shade and shadow, fountain, and trees with flowers. So the religion never affects the users to use courtyard and it is pure climate and social structure solution.

5.1.4 Place Identity

The place-identity theory is one of the theories that discussed the place identity. It discussed how place affects the behavior of human [157]. In general, it is right, but not in all parts of human behavior, because the human who built the environment with group, so it may be right according to person that not have effective situation in his society. On the other hand, it could be wrong according to people who have the effective situation in their society. For example, through three different periods, especially in earlier civilization, we observed that the king who put the rules, so, he who made the built environment, and identity, while others influenced by this built environment to determine their behavior. And before king were priests who build the environment to determine the behavior.

Another example in earlier Islam, in Abbassid period, although Islam was new, the testament, while Caliph built an environment far away from Islam instructions. They influence large number of population to behave according to their built environment, in addition there was a gap between the population, and created two classes. From these we can conclude that identity and behavior are mainly made by effective person. So our findings results disagree with this theory. And usually this built environment destroyed and disappeared at the end of ruler period. So, force and rule what affects and form our identity and lifestyle environment that, eventually, affects our houses and places, while the place can affect persons in individual way not as a group.

5.1.5 Traditional and Vernacular Houses and Identity

Rapoport, (1979) is concerned about relationship between environment and building, in addition, he is concerned about culture and lifestyle that he considers it as a complex system that never work in separation way, because of people dose not just live in building, they live in system of setting, so we have to study vernacular design

rather than vernacular architecture, we must take notion about houses settlement system, and behavior setting system, because people live and move through environment organized in time and space. Basically, we can look at vernacular either as process or as product [161].

These three elements that Rapoport, (1979), concerned on them are human, space, and time. These three elements are determine our identity, so designer must deal with this triangle as the base stone of design, human is carrying the culture, thoughts, and lifestyle, and place carrying architecture identity and represent the roots, heritage, and civilization, while time is represent the time in past, present and future.

Rapoport(1979), concern to deal with vernacular architecture, and use examples from traditional culture, when studies of man-environment interaction start to emerge, it became more important to redefinition of vernacular and of what are the environments contrasting with it. In brief he defined the vernacular is

"polythetic definition", using, in other words, a number of variables so that the definition is not a tight one but a "statistical" one. If a particular environment meets "x" percent of the criteria then it is what we call vernacular" [161].

So, designer must respect and learn from traditional houses, according to what are carrying from, thoughts, meanings, heritage, ideas, values, culture, and so on. Traditional houses must represent us in past, present and future, in order to keep continues architecture history and prevent discontinue between past, present and future, in this way will consolidate the value of our architecture identity and make it precious between other identities.

5.1.6 Sustainable Of Lifestyle And Culture

Through three different periods, receiver observed that lifestyle is similar in most parts, so the palaces and houses through thousands years are sub-similar, in order that development and the gap between periods while lifestyle are developed in small parts, and generally it seems similar. in modern days in pace of life and technology, lifestyle are change quickly, and this change start to make cut between the past present and future, it is lead to miss and losses architecture identity, lifestyle identity, and so on in other life fields. Our traditional houses are sustainable, and green. We

have to protect and developed its features in modern houses in order to keep comfortable environment with vivid societies.

Rapoport (1979) believed that the sustainable of lifestyle and houses in traditional are not changed because of “novelty not desirable” [161]. This words are not enough right, author suggest that the change is happened but in parts, because they were thinking about need before wishes and or need is first and wishes are second. So, author suggest to say, novelty not desirable if it is not suitable, and this is the clearly what Knick, (2010), explained it in his comparison between traditional and modern lifestyle;

“These differences in the way traditional and modern culture perceive and interact with the environment have various consequences for the humans in those cultures. Not the least of these is the difference in sustainability. A culture that lives in relative harmony with its environment has a greater likelihood of sustaining itself than does a culture that destroys its environment. The culture of our human ancestors existed for thousands of years without doing any substantive damage to the ecosystem. In a very few centuries modern culture has eliminated or endangered numerous plant and animal species, degraded many waterways and negatively impacted the health of many of its citizens: “better” living through chemistry!” [127].

5.2 Conclusion

Finally we can conclude points below according to the research and the elements of comparison.

The life style is a sophisticated subject, and it is a mirror of societies’ identity. It represents the understanding of ideas and how to apply it on life’s activities and on built environment. All aspects of lifestyle influence the house’s form such as education, visiting, sitting, eating, sleeping, bathing, religion, environment, and so on. The lifestyle is changeable because of globalization. Before globalization, this change used to be slow and not sensible. Therefore, we must take care of the pace of changing.

1. The social structure has huge impacts on the lifestyle, and it affects the design of house in terms of gathering and neighborhood, lot, kind of materials, and size of house. These represent need/ wishes, human scale, decoration, and security situation. Clearly, from above and according to pervious tables, those

palaces always are surrounded by massive fences. The weakness of neighborhood, human scale is not found to represent the power, instead it represents wishes besides the needs. All or some parts and techniques and materials are different, larger lots, more rooms, and all these features are not applied in public houses especially in poor and farmer houses. Classes are against the humanitarian principles, so in more developed cultures classes are disappeared, while it remains in some persons' thoughts because it is an instinct thing, especially for whom looking for greatness and proud. The classes determination depends firstly on government policy, as in Mesopotamia---- that government divided people into that classes, secondly, depended on wishes, as in Abbasside period--- that people divided into two teams one inclining with religion instructions and teaching, and the other inclining with life and its favorites. Thirdly, in late Ottoman period, people were divided according to their needs because of government policy. So classes' types may be, by force need or by wish according to conditions. Under all conditions it affects the design of house.

2. Through three different periods, the main family structure has been the same, that is the extended family. This explains and gives evidence for the strong relationship between family members. These relationships influence the size of house, that means more rooms, large lot, arrangement of activities based on collaboration, and divided food. This kind of bond between family members is created in a family environment which is more enjoyable and vivid.
3. Woman has played a role in the design of houses, especially, in producing populations. In Mesopotamia and in late Ottoman period, women remained as household, while men worked outside. On the other hand, in Abbassid period, according to development, women got more freedom. It continued using similar plans as an evidence that work and duties has low and simple effect on the design of houses. So, courtyard, besides its climate feature, is representing the best and private place for women family members to do the activities, such as washing, and cleaning, through three different periods.

4. It is clear that each population needs kind of manners to form their lifestyle. Good manners increase the level of relationship between family members and between community members. Good manners express the respect towards family members such as uncles, aunts, grandfathers/mothers, visitors, friends, neighbors, and respect all society members. In brief, good manners lead to good and strong relationships, and strong relationship lead to more communication, and more communication means the need for more space to receive person in house or what we call it reception. For example, in public places, visiting sick people is common as a good manner and who are in touch with these societies, he finds in their houses that reception is important place. While in some modern places, almost all users do not care about reception, because they do not like to receive any one in their houses as a kind of that they consider house is a private place. They just receive family members and closer relatives, so reception in their houses is normal and usually similar to other rooms in dimensions.
5. Religion plays a role in traditional houses in some parts not in all, because not all follow the religion and apply all the instructions of it. In earlier civilization, temple was the central place and the houses surrounded it from all sides, maybe there was place for idols in each house to worship. In Islam, the concept is opposite, the Mosque is for all people, especially for poor. The benefit from religion are recieved by poor people, while rich people pay. According to Great Qur'an " ...Make your houses a direction (for pray), .." (Great Qur'an, Yunus, 87) in this Sura of Qur'an it says it is order for us to build our houses toward 'Mecca, and other team say it means to build houses facing each other. The important thing that few people who put the direction to Mecca, the influence of religion in design house in Muslim concept is not putting the toilet toward Mecca neither from front nor from back. In Judaism and Christian houses in late Ottoman period in Iraq, there is a well that they used for their rituals such as baptism. Almost all clerics believed that simple houses must be built and go away from ornamentation, and no more height in building. We can conclude that religion influences the design of the house in small part, because almost all people do not understand religion enough and

the religion instructions in building houses are generally, order to build simple houses.

6. From the comparison, the development of lifestyle has huge impacts on houses' design. While simple life, with simple requirements does not need a fixed place to name it kitchen. This happened because of the requirements for it are limited with kiln in the roof, and another one in courtyard. Taking water from "Hib" - a big pottery - and putting it in courtyard. When lifestyle developed, the kitchen concept changed, its requirements increased. It became the place for preparing and taking food, storing and keeping some food, cooker place, cooking tools store, and it became the place for washing dishes and cooking pot. So kitchen moved from no-fixed place to fixed place according to developed lifestyle.
7. Iraqi society is more sociable according to these three different lifestyle period. Visiting is a kind of Iraqi life activities. Usually, there is a special place for visitors, family members are allowed to enter and sitting with house members together, while foreign visitors are not allowed to enter. Men sit with men in reception, while women go inside to sit with women in living room. Reception has kind of privacy, especially in sound isolation and vision isolation. In some wealthy houses there are two receptions one for men and one for women, with two courtyards, but it is so few in Iraq. Reception is important place for owners in designing space and usually it is the large one. Some owners recently did not care about reception, because they consider themselves as more developed, especially the ones who have been affected by other cultures, that they never receive persons in their house and usually they receive them in work or public areas, such as restaurant and café. So visiting affects the design of houses.
8. The development of life impose more requirements that are based for more comfortable life. It is developed from simple to complex. No enough furniture means it would be easy to change your sitting and your sleeping place. On the other hand, it means you do not need for more space. The lifestyle of sitting and sleeping with simple furniture or with complex one

depends on lifestyle and the development of culture in addition to economic conditions.

9. The occasions and its nature are sophisticated for designer who needs to make more integral design, especially in Iraq. The social people with strong relationship are usually more concerned with occasions. This leads users to look for beautiful and comfortable place to hold these ceremonies. The place must be more flexible to hold different ceremonies. The color choices depend on the kind of occasions and depend on the class, because author believed from his experience in his private bureau for design. Usually the people who are in lower class tend to use dark color in all parts of their life such as, clothes, furniture, interior/exterior walls, and so on. While people in high class tend to use light colors; this is because of several factors such as, cleaning, expression of economic situation, expression of development and high class.

10. Teaching is the base stone for society's development. Teaching is a tool to distinguish between the good and bad in manners, culture, habit, custom, and so on. Preventing people from teaching makes them like animals, and you can lead them in any direction you need. So, mental domination is considered in top level of danger. The technology of modern materials, houses, is developed because of teaching. When the member of family get education, they usually try to apply modern features in their new houses, while if they don't get education, they will never try to develop their houses in design. From another perspective, education sometimes make a gap in relationship between family members by looking for more privacy, more comfortable, and high lifestyle. So usually members who get education develop his lifestyle in a specific level, and we can call it "rebel against his conditions". Moreover the teaching changes families from extended kind to nuclear kind. All in all, the teaching develops lifestyle, and this development affects the place for house, lot, material selection, family statute. As a result, the house will represent more and more new needs and wishes. So, we hear from educated people, except architects that they refuse to strengthen traditional houses,

because they think that it represents low lifestyle. Also, they believe that it is not suitable for modern lifestyle, and this is the problem for large number of population in Iraq.

11. Environment is changeable. And it's an important thing in designing house to deal with environment especially with global warming, and recently all healthy institution, world environment, and architecture looking for green, sustainable and smart houses. From this side, these traditional houses are considered green, and sustainable, because till now it works as houses and families living in it. We just need more re-usable part of technology to be tradition-modern houses.
12. In these three different periods the local materials have been well-used. This is due to the environment and the difficulties of exporting materials with traditional means of transportation. The importance of local materials is, firstly there are more crafts that have the experience to build with it, secondly, it is tested for its sustainability. And its characteristics are well according to the climate, so local material carrying the identity of place and its roots.
13. Classes in society influence the urban planning that affected the house in lot and zone according to the city. The research concludes that kinds of urban planning if it comes from classes like what happened in Mesopotamia and Abbassid period if it is intentional, play a role of part in forming the urban fabric of city in general and forming the houses, in particular. While in early nineteenth century, classes in society were founded but in a way that is not imposed by government or by force, because classes in society founded at least by the role of economy. If classes of society are not imposed, it was founded by the role of economy, and social status, so from this side urban planning influences the design of houses in terms of lot, the value of area, and services.
14. Above, three periods explained the shape of roads. These organic roads express lifestyle needs. For example, in the period between 1890 till 1920,

these organic roads were shaped as pyramidal circulation, and this type of ways played a role to move air because of rarefaction pressure that supply roads with cold air because of shadows. Also it supplies “Badguire” chimney of air or air catcher. This kind gives expression of unity and strong neighborhood between families, as a union house. The organic influence, the shape of lot that always with wrong angles, and architecture will be compelled to find solution to get the right angles. In pre-urban planning area roads never influence the shape of lot. In organic roads, there are mutual effects between roads and lots. Finally, we can conclude that in public areas like organic circulation, because public area does not like straight roads, that come from their culture and they sense that it is more relative to them as organic. Because author sees almost all people in his village even if there is clean and sub-straight road they always look for organic and when I asked them generally they say it seems closer although it is not. In author’s opinion, there is another reason that makes them like organic ways instead of straight. In public areas in all worlds, we see the family members sitting in the gate of house, and this organic circulation play a role in making shade and shadow that is useful for sitting and prevents visibility. The other thing that affects the roads is the development of transportation means, cars became more important need for families, this modern means the need garage for parking, need road to move and arrive the house.

15. The design system of facade is affected by several things. First of all, the security situation that always lead to prevent the owners to ornamented and designed elevations because of non-stable security situation. The second thing is looking for privacy, and getting away from others and these kind of people don’t like to represent their economic situation. Third of all, there are kind of people who believe that house is a private property so, owner and his family have the right to enjoy in it so they are just interested in its interior design because they think that exterior elevation is for guests. Finally, there are another kind of people who are rich are always looking for change in the elevations according to new materials, these kind of people don’t care about interior in the same interest of elevation and these people like showing off to the others. In author’s bureau where he meets a lot of people from these

kinds, the exterior elevation is integral to design which is not indisputable, it must represent the style of era mixed with spirit of place to keep the identity of place and heritage of originality. From above, we can understand how fear and privacy make designer and crafts to be enclosed toward exterior and openness toward interior, that reduce the interest of exterior elevation that is designed as solid and smooth, while the exterior elevation moved to be sub-exterior around the courtyard. This style of building comes from the fear from enemies and environment solution, in Mesopotamia period, while Muslims find it as a good solution to get privacy. In addition to environment solution, it remained so in earlier nineteenth century houses as good solution for the environment and get privacy in addition to fear. These two elements “Shanashyle” and wind chimneys “Budguire” are a result of Ottomans, and Persians effects in Iraqi architecture that were so common in Iran and south of Turkey.

16. Gate is located on fence and it is considered as the first entrance from exterior to the interior, its size and decoration belong to the desire to show off, protection to express luxury. So we always see it in palaces and castles, and on the cities fences, the portals or second gate, it is the direct entrance to the building, it represent the same things in gates but especially, it is different in size and dimensions. In public houses, we observe that the gate is simple with poor ornaments and it is close to human scale, while in wealthy houses and palaces the gate is huge somewhat and double the human scale or one and half, more ornamented. So it is important to take into consideration that, the style of design and materials as well as the function, these three elements are important to design the portals and Gates. We can conclude that the economic situation, protection, social status, and desire to show off are several reasons that affect designer to interest of design the portal and gate. So, for example, in the seventies of nineteenth century, Iraq was safe and the people never thought about security, so almost all people built low fence (mostly just handrail) with gate sub-open, it represented safety.
17. Openings are an important part in house that is responsible for supplying daylight, healthy factor by allowing the sun to sterilization grounds, walls,

furniture, etc. As well as to change and refresh the air, it takes a part in exterior elevation, so designers have to take into consideration several factors to determine the shape and size of window such as environment. For example, in Iraq the weather is mostly desert, so it is important to make window small as much as possible, using and employing shade and shadow. The shape also must be designed according to limited style, for example in Iraq, nowadays the designers design according to modern lifestyle requirements that are looking for beauty more than function. We can observe that house elevations are just windows, and in summer we see all these house covered the window by exterior curtain or by covering the window by piece of carton, in fact it is treatment of the wrong things by wrong way. We experience four seasons as winter and as summer, frankly there is no spring and autumn seasons in Iraq. The other factor is materials of window, the materials used must be suitable and work in Iraq climate. "Shanashyle" in traditional houses is considered integral from where shape and function, prevent outside vision, prevent direct sun, shaded street, correct right angles of lot, cooling water jar, insert lighting to rooms, and allow users to see exterior with high privacy, in addition to the beauty of harmonies in facade.

18. The main way of structure houses through three different period is by using bearing walls, and wooden roof in addition to using brick and iron for roofing in late Ottoman Period. The use of local materials above in Mesopotamia period affected the design of houses in dimensions of space, as well as in Abbassid period. While in late Ottoman period in Baghdad after importing new material such as iron ("shelman" or I section) that gave builder more flexibility to raise the space dimensions. This is one of the defects in traditional houses, that consider limited in spans because of using local materials.

19. Style is expression of the range of development of lifestyle. It expresses the scope of the influence of the other culture. We can consider Mesopotamia style as pure according to that they first think for settlement. The style was simple, and it represented the needs of society. Courtyard is the main concept of house and palace, solid facade with rough texture, being in human scale, no windows, and decoration in part of palaces and defensive style. In

Abbasid period, according to the development of Islam Empire and mixing culture with others, style was developed but not in general shape, the traditional style developed according to development of crafts, new concepts of lifestyle, looking for show off in addition to needs, massive building of palaces and non-being of human scale, and smooth exterior facade with ornamented by brick. In author's opinion from look to these styles especially in plans we can touch, that environment is the important specific element, especially no new technology in cooling and heating system in that period. In late Ottomans period the style as well as similar to previous two styles.

The decoration is was part of traditional houses, while it different from period to period, according to materials, development lifestyle, economic situation, religion, crafts, experiences and marriage with other cultures. The concern on decoration in building is consider one of luxury aspects, and it is integral and non-fundamental, it represents the wishes and never represents the need, because it is not doing any function except the beauty, while we can see some solutions giving beauty, for example the head of column even if it simple but give some of beauty, exterior windows "Shanashyle". The decoration depends on economic situation, so we always find it in palaces, and in some parts of wealthy houses. From the comparison above the different are clear in each period, in Abbasside is became special style, and wishes to do decoration, the development as well as is important for new materials and new ways of work. In earlier civilization, they use decoration in simple way, these give us an idea about at least to author opinion, it is nature in human being, that human tend to ornamentation, and colors, at least to be in touch with nature, another important thing that religion is affect the decoration in concept such as in Mesopotamia they ornamented them idols, while in Islam period ornamented the walls by Qura'n calligraphy, and in spite of all clerics, believed that paint human figures is forbidden in Islam, while it is used in Abbasside and Umayyad periods.

20. Comparison of the different periods and religions shows us the developments, concepts, ideas, and lifestyle the identity of Iraqi houses and its features. This's considered to be a great evidence of that courtyard does

not belong to religion, as far as it is related to climate. Courtyard is main hallmark, thickness of walls, non-direct entrance or broken entry, great private space in touch with outside. Employment of shade and shadows, using portico, using “Iwans”, usually rectangle shape plans. Plans represent the function as important and inside elevation instead of outside one.

5.3 Summary Of Recommendations For Modern House Designers

1. Encouragement of using traditional urban planning, that represent;
 - Strong relationship neighborhood and vivid districts.
 - Using green areas.
 - Encouragement of walking and reducing of using cars.
 - Design houses to be multi-uses.
 - Planning each city to realization self-sufficiency, from where, residential, work and amusement.
 - Concern on compact structure.
2. Inward direction in design houses for more addapting to invironment, by using courtyard as perfect solution of climate conditions, especially in global warm and changing of Iraqi climate that move toward desert, in addition as part of identity of Iraqi architecture.
3. Using small windowas with sun-breaker, or depend on shade and shadow.
4. Concern on main entrance design and employment the broken-entry as traditional trait for get privacy and represent identity of Iraqi architecture
5. Concern on interior design to achievement more comfortable for owners, in the same significant of exterior facade.
6. Using “shanashyle” as traditional trait and try to develop its concept according to moderen materials and lifestyle.
7. Using local materials that appeared through thousands years as more appropriate for creating comfortable built environment and sustainable in the same way.
8. Using portico as solution to employment the shade and shadow.
9. Using Iwans according to location in north and south in houses as perfect places do function as living area.
10. Using sub-circular and pointed arches as pure Iraqi style of arches.

11. Using and re-employment basement and “badguire” as perfect solutions of climate and to creat green areas.
12. Houses is must do its function as house, so designers must ask the client about the lifestyle that he practice with his family, and employment the Iraqi architecture identity to creat the suitable and comfortable built environment. To know the lifestyle, designer must ask about each details in them life.
13. According to Iraqi lifestyle, reception represent the important part in house, designers must know the occasions that family used to hold inside house, so the complex part is house is reception, from where location and dimensions.
14. Concern on privacy and its leveles according to client and district.
15. Using fountain inside courtyard.
16. Traditional Iraqi houses probably is perfect for extend families type, and author suggest to employment these houses to be multi-story houses, in order to collect the family members.

5.4 Future Work And Recommendation

Usually, life style and culture change whether toward the better or toward the worse. Globalism aims to make everything similar in every place, trying to cut the roots and eliminate civilizations, heritages, habits, manners, and everything that determine and identify an group of people. Globalism planned to unify way to make it the sole path for the world, and we are going to, whether by our will when we imitate the other or not, when we think that we are mistaken wrong and the other is right.

Preserving identity, habits, culture, lifestyle system, is a complex and difficult, because of speed of society mixture, especially in mass media. The designers must take care when they design houses and don't always apply all clients' requirements. They must have the power of cogency, in addition to the governments. Author friend Mustafa, astonished when told me about place in London, after completed new building in that place the workers start to use black and green fume and applied it on elevation, and his curiosity prompt him to ask the supervisor engineer “why you do this for new building”? He told him it is heritage area and we must make this new as old in order to not deform the city sight. It is the right way to preserve civilization and don't let lifestyle change everything in identity and habits, and for who like

modern lifestyle it is easy to establish new cities far away from heritage places. There is a massive difference between copying in a blind way and imitation in a modern way. People must be in touch with world development, in the same way must take care about influence of other lifestyle in our lifestyle, identity customs, habits, traditions, etc.. We have great values in our life and we represent these values in each part of our life, in speech, sleeping, even in forming houses. These values greatly determine our identity and culture. So, if we miss these values we will be similar to each other in each place on the world, so not every new in lifestyle is right, and not each old is wrong.

This simple research hope to be the starting point for deeply and several studies for how lifestyle influence Iraqi architecture. From where the less of study in this part, the research suggests and recommends researcher to conduct a research and study on each aspect of lifestyle in a deeply way. And then all researches will collect together to make a framework or program to control the change of lifestyle from side ,and to encourage of using traditional houses features in modern designs as sustainable, green and healthy from the other side. These studies must be conducted by teams consist of anthropologist and architects.

Finally, the research recommended a program to control the change of lifestyle, and motivate people to respect their traditional and identity of their civilization. That does not mean to stand against development or technology, but it means to correctly employ technology and developed lifestyle to be suitable, in harmony, and agreeable to our civilizations

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APPENDICES A

CURRICULUM VITAE



PERSONAL INFORMATION

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Marital Status: Married

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EDUCATION

Degree	Institution	Year of Graduation
M.Sc.	Çankaya Univ., Faculty Of Architecture, Department Of Interior Architecture	2016
B.Sc.	Baghdad Univ., College Of Engineering, Architectural Engineering Department	2003
High School	Al-Iadadiya Al-Markaziya High School	1998

WORK EXPERIENCE

Year	Place	Enrollment
2010- Present	Ministry Of Education, Engineering Department	Designer/ Boss of Designing Branch
Nov.,2009, - Feb., 2010	Qandel Organization	Project Manager
Feb., 2009 – May, 2009	INTERSOS Organization	NGO Team Leader
Sep., 2007 – May, 2009	IRD, International Relief & Development	CIES Manager, 1 Year Operation Manager, 8 Months
Jan., 2007 – Aug., 2007	(PRT) Province Re-structor Team In Diyala Province	Site Engineer
Aug., 2005 – Aug., 2006	Washington International Group	Inspector-QC.Sr.

FOREIN LANGUAGES

Advanced English, Beginner Turkish

HONOURS AND AWARDS

1. Iraqi Engineering Union, 2003.
2. Arab Engineering Union, 2010.

HOBBIES

Design, Travel, Books