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Research paper

Space Arrangement and Accessibility Impact of the Iraqi Traditional Courtyard House: An Investigation of Two Case Studies in Iraq, Baghdad

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Abstract

Spatial arrangement and components of the traditional Iraqi courtyards house have been utilized to express the residence activities inside the house and controlled their privacy. Despite its rich social content, the importance of those traditional house has been forgotten due to the rapid construction in Iraqi development. The lack of understanding on the meaning of the courtyards houses has led to a considerable gap between the current and the traditional housing resulting in an imperative need of urgent investigation of the issue. The study investigates how the Iraqi traditional courtyard house functioned and served both as a social and cultural place for the family and the guests activities. The two case studies of traditional Iraqi courtyard houses in Baghdad; in Al-Kadhymia district, were selected and morphologically analysed in this study. Floor plans and drawings of each case study were utilized to understand the physical planning of the traditional courtyard houses. The study concludes that the traditional courtyards have indirectly influenced the local people socially and culturally. The courtyard are utilized for various socially connected activities relating to the unit residential family and guests creating a more hospitable environment for interactions and better lifestyle. This study notably fills the gap in the design of the contemporary housing in Iraq and can be further expand to regional area.

Keywords: *Traditional Iraqi courtyard houses, Social and cultural place and Contemporary Iraq Housing, Space arrangement and accessibility*

1. Background of Study

1.1. Traditional Courtyard House

A courtyard house is a cellular structure comprising a central precinct with chambers arranged around the perimeter (Spahic, 2008). Courtyard houses can be found singly or in settlement groups. Where courtyard houses are found together, their exterior walls are always physically shared or connected (Ishteeaque & AlSaid, 2003). A courtyard house is a type of house that has a central courtyard where all the rooms and house facilities disposed around it. Mainly, the secondary spaces (service rooms) and corridors attached directly to the courtyard and through them we can access the main spaces that located just behind them (Al-Haidary, 2008). The clever arrangement of the design layout of a courtyard house makes it possible for a guest to enter the courtyard without disturbing the family members, and in some cases there is more than one courtyard in the same house. The second courtyard will be specialized for only family members where privacy is ensured for women (Yu, 1999).

Among the scholar, (Othman et al., 2013; AI-Azzawi, 1994; Alchalabi, 2011; and Al-Hemaidi, 2001) believe that the traditional house architecture represent the architectural mass type harmony, which depends on its plans conformity and their type represents the harmony recurrence of the plan and its shape, the shape its architecture has symbolic significances probably including many physical meaning, and these shapes have many architectural elements. The traditional built environment is generally characterized by one and two-story courtyard dwellings (Al-Hemaidi, 2001). The courtyard plays a central role in the daily life of the family. It is the place where family activities take place without their privacy being diminished by overlooking adjoining dwellings (Spahic, 2008). Physically and symbolically, the traditional Arabic house has served two essential functions; firstly, provide the family with place to express its emotions and fell comfortable as habitat; and secondly, inhabitants can protect themselves from unfavourable conditions from the outside, which called shelter (Sharif, Zain, & Surat, 2010). He further asserted that with these two functions, the traditional Arabic courtyard seems to be the appropriate space for family.

1.2. Social and cultural spaces

The courtyard house and its components have provided a peaceful and comfortable environments spaces to the Iraqi. It noted that the local culture of Iraqis has significantly influenced the form design of the courtyard traditional house. The site planning of the courtyard indicates that it has met the requirements of the room's layout and spaces use (Edwards, 2006). Spahic (2010) on the other hand conferred that a home is an embodiment of human privacy, apart from providing shelter, security and several other functions. This privacy is

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intended to protect the female members of the family from strangers, especially while entertaining guests at home. Housing is a major problem in Iraq (Mohammed, 2013).

1.3. Contemporary Iraq Housing

The socio-cultural value of the particular community also plays important role in shaping the design of a residential unit. Within this notion, gender and religion factors have influenced the housing design in Iraq. Correspondingly, (El-Shorbagy, 2010) states that houses also represent the background or framework for human existence. In terms of activities, the house is defined among Iraqis as a place where the family can flourish; feel comfortable and teaching the new generations (Spahic, 2010). The Arabic house with its structural clarity and beauty can be conceived as being generated from the plan, which gave form and order to the space within as well as measured and scaled by the human body and its experience. The Traditional courtyard house was also established and based on a series of sustainable-oriented principle (Ani ,1994), in which forms and spaces were dictated by habits and traditions (Hussein ,2013).

2. Literature Review

2.1. The Courtyard House Components

The spaces in courtyard house within Iraq region called in various, formal and informal terms depend on the components, location, dimension or even its height. Moreover, some of the elements were renamed based on the type of decoration or the colour. We might enclose these spaces into (Al-Haidary, 2008) asserted that the courtyard house elements can be categorized as into: closed spaces such as bedroom basement (serdab), kitchen and bathroom; Partly opened such as the corridor (tarma); without roof such the courtyard space.

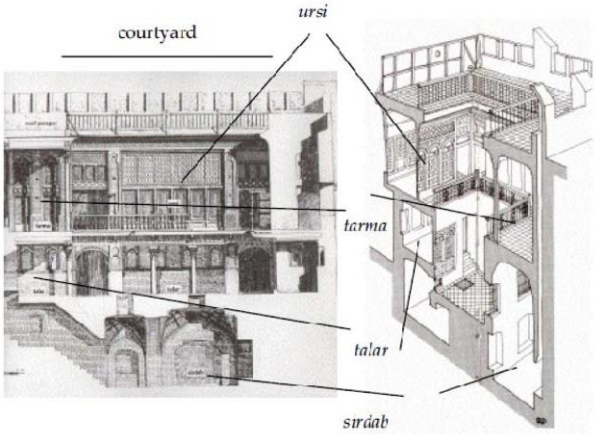


Fig 1: The Iraqi traditional courtyards house components
Source (Al-Haidary, 2008)

This study focuses on specific elements of the Iraqi traditional courtyards house. Those elements include, the courtyard, entrance and the corridors. The courtyard space is the main element of the traditional house that all the house spaces oriented toward it. Windows and doors of rooms such as bedrooms, kitchen, and receptions are opening on the courtyard space. The courtyard space is used for the family interactions, activates and climate solution for hot-arid regions. The courtyard is also containing and protecting the family privacy by its incused design form. Furthermore, the other wonderful portion of the traditional house is the corridor (Tarma), which it is the narrow space that connecting the house spaces within the same floor. It is usually uplifted by many columns for supporting purpose and prestige. The Tarma view is looking on the courtyard space and its length is varying. Entrances have been utilized in the traditional courtyards house to function differently based on the location and the users. Guests and family members were assigned to use specific doors to enter the house. Figure 2 shows a section in the Iraqi traditional courtyards house.

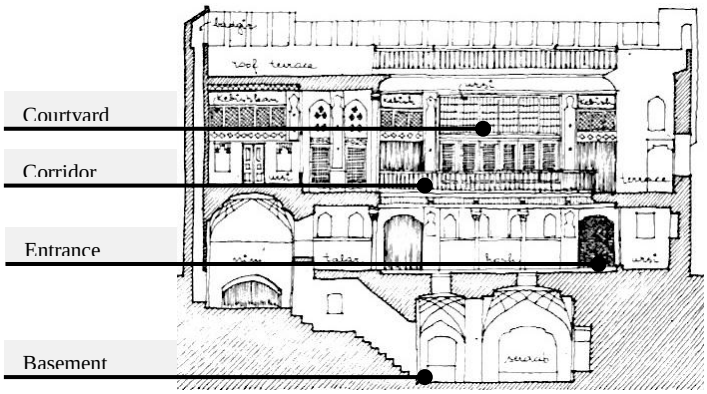


Fig 2: Section in a Traditional courtyard house, Shashoor's House
Source (Al-Haidary, 2008)

2.2. Architecture and Socio-cultural Behaviours

Moore (1979) described the relationship between the physical environment and human behaviour. The research outlined the importance of building understanding and the response to people need through their behaviours. The figure 3 below addresses the main factors related to human needs and the relationship with surroundings as Moore empathized.

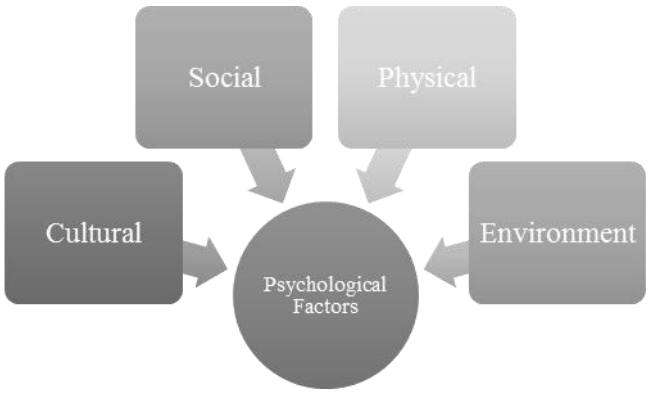


Fig 3: Psychological factors and surroundings
Source (Moore, 1979)

Moore described that the elements that affected the psychological factors include cultural, social, physical and environment in which the unanimous goal is to satisfy the human needs. Any missing element might lead to huge gap between the design and the user that affect the values of the residence when related to residential buildings.

Ani (1994) and Farah (2001) tried to describe the way society behaviours influences the Iraqi houses design of in past and currently. They stated that despite of the respect and trust, segregation is found between genders in and outside the house. Islam is the main religion of Iraqis and the country itself, therefore; veil or any type of protection should cover the house due to privacy purpose. Rarely women are supposed to work especially in rural areas and low-income families. Privacy is restricted in the house and outside it, families grow inside the house and kids get married within the same house. The house definition between Iraqi is a place where the family can flourish; feel comfortable and teaching the new generation.

Regardless, the traditional courtyard house reflects the cultural and social needs. The most appropriate courtyard house design simultaneously creates private and comfortable space within two-story low rise buildings (Kodmany, 1999). The house also should not intrude the privacy of neighbours. The priority is for man in the house and street as the leader of his family. This whole notion is translated in the introverted design of the traditional courtyard house which helped to generate a space that women are not exposed to the street. These features are very common in the traditional courtyard houses of Iraq, Syria and turkey (Bekleyen et al., 2011).

From the discussion of the literature, it can be concluded is that the form of the house has the important role to determine the family attitudes and the environment of living. Despite its rich social content, the importance of those traditional house has been forgotten due to the rapid construction in Iraqi development. There is a considerable gap between the current and the traditional housing in terms of understanding and integrating the traditional Iraqi courtyards houses elements in contemporary design.

3. Methodology

Morphological analysis and case study are the method of study that been selected to examine the selected traditional houses. Those dwellings been analysed based of several factors that will be discuss later on in this paper. The study of morphology or urban morphology involves consideration of town planning, building form, and the pattern of land and building utilization (Ibrahim & Omer, 2014). Appreciation of morphology helps urban designers to be aware of local patterns of development and process of change (Carmona, 2001).

The morphological space is also considered as the study of geometric shapes and the limitations. Architects who study those areas are investigating the form of language in space. Studying these aspects (spatial, physical and similarly system) could lead to help understand the morphological form of architecture of any building structure. Morphology provides an easy access of knowledge understanding of any development and composition (Mitchel et al., 1975) and (Habraken, 1988). Morphological study can be involved in several areas that include form, space and structure. Slamet (1993) in his study have analysed several case studies that embraces meaningful architecture elements. His study was set to compare those cases using morphological study to understand the form structure and planning design of each case involved. Al-Azzawi (1994) have investigated the characteristics of the traditional courtyards house. His study was based on analysing those houses in term of shape and planning; sizes, number of floors and heights were implemented to measure the dimensions of those traditional houses.

The key to understand how the house interact with the residence is to ascertain the significance spaces which deal with the house members as well as the guest. In the case of Iraqi traditional courtyards house, it was designed to be fully capable of having multiple families inside the house. Examining the house arrangement; includes spaces organizing, will help to determine the level of interaction between the spatial areas. Accessibility is another factor that magnificently serve the Iraqi traditional courtyards house and might contribute to better understanding the concept (Haraty et al., 2015)

The method of case study selection can be driven by several guidelines that summarize the selection features. Curtis, Gesler, Smith, & Washburn (2000) have mentioned the guidelines of the samples selection. It stated that the theoretical criteria of the research have the most implements on the case sample choice. Samples are usually small in size but they intensively studied as each sample hold a massive amount of information that can be extracted. Furthermore, the qualitative study should be explicit and reflexive that related for the case

selection rationally. Each case was picked to representation of the typical type of traditional courtyards in Iraq. El-Shorbagy (2010) stated that the region has similarities in construction, people behaviours and cultural attitudes, therefore; the traditional houses of this region are sharing similarities in function and design. The two case studies are located in Baghdad (The capital of Iraq) which considered the richest city in term of its historical and traditional architecture.

3.1. Case Study 1

The house is in Baghdad and today function as a hotel. It first belong to Mr. Mnaheem in Al- Kadhymia, and after his death and converted to a hotel to become a monumental for the visitors because of its design and form. The house contains of two stories and two courtyards (Reuther, 1910).

3.1.1. Space Arrangement

The guest's zone is on the left side and it is accessible from the left entrance, and leads to the south courtyard. Whereas the private space (family space) is the main centre courtyard; spaces and rooms are surrounding it. All the family activities are in the main courtyard and the small one is serving the guests needs. The two courtyards are not entirely separated from each. Although the main purpose is different, there is an opening corridor that connecting them. The corridor is linking the spaces in the first floor. It is usually surrounding the courtyard space and several columns holding it. Figure (4) is showing the ground floor drawing of the house, and the two different in sizes courtyards.

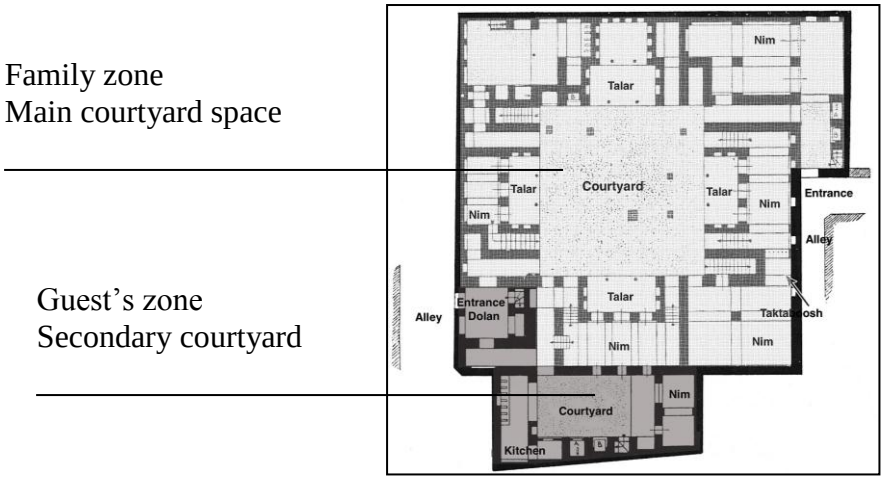


Fig 4: Morphological analyses, Space arrangement, Ground Floor
(Source: Oscar Reuther, 2005), (Drawing: Author)

3.1.2. Accessibility

This traditional house has two entrances, one from the left and the other from right. The left entrance is functioning for the visitors; the right one is for the family use. Moreover, each entrance has a transition area; the one from the left (Guest's entrance) is branched to multiple exits. Every exit leads to different space. The system of stairs is scattered around the main courtyard, they are leading to the first and basement floor. Figure (5) drawing the attention towards those two entrance with the transitional area

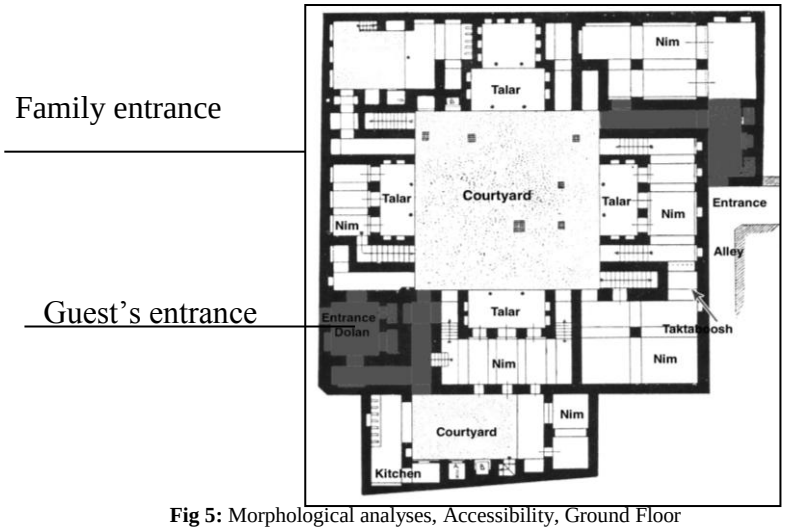


Fig 5: Morphological analyses, Accessibility, Ground Floor
*(**Source**: Oscar Reuther, 2005), (**Drawing**: Author)*

3.2. Case Study 2

The house is in Baghdad, in Al-Kadhymia district. It's one of the traditional courtyards houses from the 19th century that has a special wing for the guests (Al-Haidary, 2008).

3.2.1. Space Arrangement

The visitor's space is on the first floor, and it is accessible from the stairs on the entrance area. The family zone is the ground floor such as the kitchen and the bathrooms. This house was designed to separate those parts by using various floors. The main reason was due to the limitation of the land. The other reason is to create such space that visually segregated between the family and the guests. The first floor was mainly serving the guests only, thus, it also could be functioning for the family if needed. However, the ground floor was entirely for the family which it has all the necessary spaces such kitchen, bathroom and bedrooms. The corridor and as highlighted in figure (7) is covering the north and the west side from the first floor and its connecting the spaces from those sides.

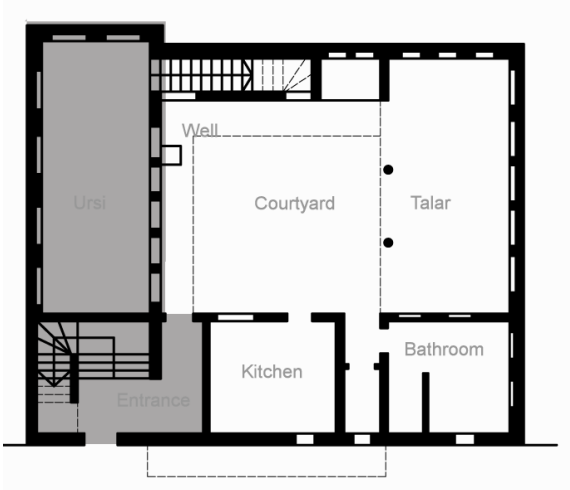


Fig 6: Morphological analyses, Space Arrangement, Ground Floor
(Source: Al-Haidary, 2008), (Drawing: Author)

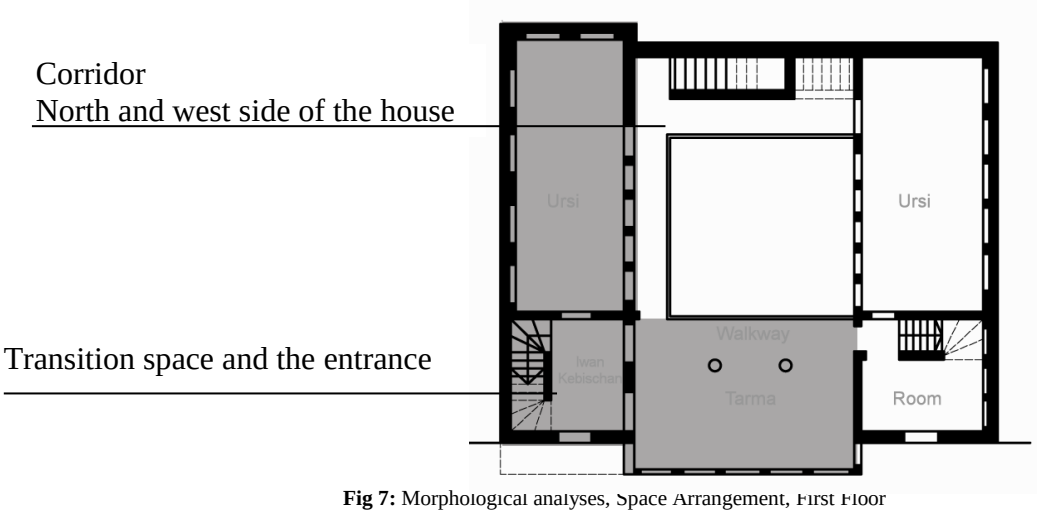


Fig 7: Morphological analyses, Space Arrangement, First Floor
(Source: Al-Haidary, 2008), (Drawing: Author)

3.2.2. Accessibility

There is only one entrance for this case study. It is used for both the family and the visitors. The transition space located on the only entrance has a stair leads the guests to the first floor, see figure (6). Despite the fact that this case study has only one entrance, the design of this space was planned perfectly to avoid any type of interactions between the visitors and the family members. The placing of the stairs just at the entrance created a transitional area to allow guests members to take the stairs up to the first floor where it specified for them. This transition space is also a buffer between the public space and the house, the irregular design protects the house core from the unwanted vision that might come from passers.

4. Discussion and Conclusion

The analysis from the drawings of the two case studies have revealed the concept behind the design of the traditional courtyard house in Iraq generally and in the capital specifically. Few but major points have been understood from investigating those houses space arrangements and accessibilities. Firstly, it was clear that the division between the family and the guests is required inside the house, both case studies showed that there was some kind of adjustment either by separated floors or by the courtyard within the same floor. For the first case study, the analysis showed the need of two spaces to segregate between family and guests. Two courtyards functioned differently for this need. The corridor was essential to link the house spaces in the first floor, it was also linking the family and visitor's spaces in the same floor. However, this type of division was also found in the second case study. Different floors were used for the same purpose (segregate between the family and guest's spaces). In term of accessibility, case study 1 showed that there are two entrance from two different sides of the house to ease the accessibility to the unit and to avoid any type of interaction between the visitors and the family members. Meanwhile, the other case study emphasized that despite the available land and limitation, the only entrance still is serving properly and the segregation was by using a stair that leads the guests to the first floor. Moreover, the both case studies have a buffer space between the outside and the inside of the house that located at the entrance, this space is for creating kind of privacy and vision block from the passers to the core of the house.

The study concludes that the traditional courtyards have indirectly influenced the local people socially and culturally. It contributes to a better local life style through social interactions triggered by various activities that help to create hospitable environment for raising the family and serving the guests. In modern context, Iraqi or international designers should be able to respond to the local resident's needs by integrating the traditional courtyard house design elements in the contemporary setting. The spatial arrangement centring the courtyard need to be responsive to the occupant's essentials. While the socio-cultural factors are essential considerations, the level of privacy should be prioritized in any future design to reflect Iraqi strong culture. Lastly, this study notably fills the gap in the design of the contemporary housing in Iraq and can be further expand for more regions.

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