

Domestic Spaces and Socio-Cultural Aspects in Khartoum City: A Study of Continuity and Change

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Abstract

The culture of the people determines and shapes the domestic space in their domestic architecture. Subsequent modifications of the idea have focused on more precise revelations of how the spatial arrangements of material culture are patterned. Traditional Sudanese dwellings have been converted by urbanization and many traditional practices.

Through a topological analysis of house plans and patterns in Khartoum city, this study detects a transformation in the house-type developed by people during the last five centuries.

The study determined to find out how the use, organization and meaning of house space in Khartoum city. Beside the continuities over the years across the entire City, the differential of Socio-cultural aspects which have a significant impact on the house's layout of the family. Analysis of the attitudes and responses of the residents using factor analysis revealed that both socioeconomic and socio-cultural factors handle the change and continuity in the domestic space.

Keywords: *Spatial, Socio-culture, Built Environment, Culture, Domestic space.*

1. Introduction

Denyer (1978) describes housing as symbolic of the social-cultural heritage of a people and culture; culture, thus exercises a strong influence on the types and forms of houses. For instance, Platt (2006) viewed architecture as a complex structure communicated by the use of abstractions and model. Others, such as Prussian

(1978) analyzed it firstly, as the building process or as a product of construction technology; secondly, as the enclosure of space with an analytical emphasis placed on form and function; thirdly, as it is approached in this study, as a "material manifestation of a culture's symbolic system, quantification, graphically and formally, of the system of values inherent in a culture" (Prussin, 1974).

The changes and continuity in the domestic space over time in Khartoum. Beside differential of Socio-cultural aspects reflected in physical characteristics of the house types. Thus the study attempts to investigate the Sudanese family lifestyle, way of life and cultural aspects associated with family basic need, including dwelling spaces and their usage

1.1 Goals and Objectives

This study aims to find out the possible ways to overcome the above research problems. Examine and explore the inhabitants domestic life style and people's attitudes to different house-types.

Analyze the social, physical and cultural characteristics of house-types and the domestic space in Khartoum.

Determine and analyze the changes and the continuity in house-type characteristics throughout times in Khartoum.

1.2 Methods

The following methods used in this research to discuss the specified problems.

Documentation reviews, besides web sites, were the main sources for the preliminary information. Direct observation of the cases to understand of aesthetic, functional, and formal qualities of architecture.

Sketches are used to analyze the pattern, changes, and the functional relationships in a house. Photographs are used for documenting use patterns of the spaces, and sequences of functional activities.

2. Theoretical Framework

2.1 Culture

The most recent definitions of culture focus on the cognitive ideal meaning of culture. According to Low and Chambers culture is described as those social structures, socio-political and economic, which obliged behavior, according to cultural standards (see fig 1). They also define culture as a cognitive structure represented by a set of rules, but these rules are in the mind, in coded in a language, and serve as a template of cultural ideas (Low, and Chambers; 1989).

According to Hardy, 2005, asserted that colonialism, industrialization and globalization have long since wiped out rooted architecture the world over. He excepted in the diminishing vernacular traditions that is managed well without architects. Western architecture has been trying for 26 years to re-engage with traditions to provide continuity, to temper change, to express cultural identity, success so far has limited. Hardy attempt to answer the question of valid architecture explained that certain variables are essential such as; social use of space, custom, way of living, and rituals. Also, sociologists and anthropologists are useful here and a multi-cultural society, as the other aspects of valid architecture are spatial, aesthetic, symbolic aspects of architectural languages.

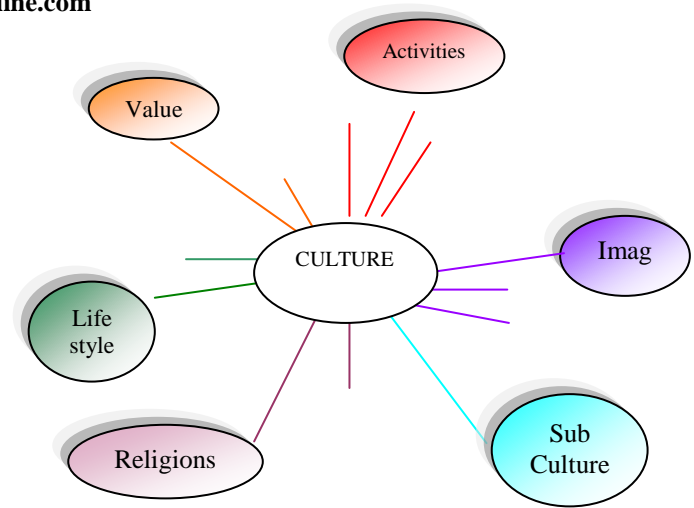


Figure 1: Aspects, culture and their relation to build environment (Source: Rapoport; 1976)

Rapoport (1990) attempted to clarify how culture influences the designed environment and considers this relationship in terms of _responsiveness of architecture to the human condition. He distinguishes between core culture and its periphery in conditions of rapid cultural change. He further explains that certain elements (peripheral) change to new ones. But others (core) are retained for continuity until the bitter end. In his view _culture-environment relations' has been due to certain changes in design. Built forms have responded to the culture. So for designing environments to become responsive, one needs to change the professional culture. Then addressing cultural responsiveness of architecture professional culture may at long last be starting the change.

Conviser (2000) in trying to examine the changing relationship between people and their housing in several cultural settings. He found out a deep level of people's housing pattern can be taken as a metaphor.

Rapoport (2000) observed that if the culture does not appear to be critical to design, it will still be very important in its understanding and explanation. However, in dismantling the concept of culture, some answers might be getting. Now, since culture changes, there is also the question of how long a group maintains its identity. Therefore, in trying to conceptualize culture, Hanson (1983) saw culture as the property of groups' exercising control through information and rules; these produce a structure

within which elements take on meaning. In analyzing cultural change, Rapoport et al (1983) outlined the following four basic ideas that need to be identified in a simplified form in a group.

(A) The relevant critical central or core social units of the group and their role in the culture. (Kin, age, ethnic religion, initiation etc.).

(B) The corresponding physical units at different scales.

(C) The units of social integration or interaction of the group and other groups.

(D) The institutions of the group (ways which economic, recreational, rituals, governing and other activities are carried out and the settings for these).

2.2 Way of life, constancy and change:

The socio- cultural forces sort out by Rapoport into five elements; some basic needs, family, the position of women, privacy and social intercourse (Ibid, 61). Rapoport continues to suggest that the nature of man and his institutions contain elements of both constancy and change. These elements which affect the subject of built form and can be in relation to the biological nature of human beings and their perception or behaviors. Rapoport also suggests that the house retains its validity and usability long after the culture or way of life that created them has changed. He argues that the European medieval town is more livable and satisfies many perceptual needs better than present-day towns. Roberts' argument some feature of behaviors and the way of life are constant, or change. Also, he argues that old buildings are replaced not because they are useless or inadequate to the way of life, because of the newness. The tendency to restore old buildings is now growing.

There are certain variables that result in this social and cultural change in architecture house form, buildings and domestic built environment. These variables are globalization contact, economic growth, changes of subsistence, technology, natural changes, colonialism, leaders, conflicts within a country and inventions. The results of language, knowledge and skill, Change in beliefs, structural syncretism, exploitation (e.g. Slavery), cultural interaction, and change in standard of living.

According to Preston, social and cultural continuity can be likened to individual habits- a comfortable pattern of behavior that gives an individual a sense of security and personal control. But there is a high correlation between the rate of social and cultural change and resistance to that change. Where members of society feel that change is out of control, it is likely that the desire for continuity will become extreme. While social change is itself continuity, certain periods of human history have created —great transformation, I (Polanyi, 1973).

Oke (2004) emphasized that every human society has a distinctive culture which governs the behavior of its members in relation to their physical and socio-cultural environment. He believes that culture is learned and stable; this does not in any way suggest that its patterns are static and unchanging. Oke sees the synchronic and diachronic methods as approaches to studying cultural change. The synchronic emphasizes cultural continuity while the diachronic emphasizes cultural change. However, the two approaches are not opposing methods, for continuity and change are essential aspects of any culture.

The various theories of social and cultural change aforementioned had received their different criticisms. However, some conclusions draw there is no known law of social and cultural change that holds for all cultures and societies at all times. Yet change must be and determinable with reasonable accuracy. If cultural and social changes are unpredictable, then it is futile to search for order.

3. Development of Urban House Design and Image in the Societies

3.1 Urbanization and Urban Change

Wang (2004) is of the opinion that every significant urban change is an economic reformation. Rapid economic growth will cause large-scale increases in personal and household income. Economic growth can be accompanied by a sped up d urbanization leading to transform the urban economy. Economic and social changes have also accompanied by spatial and residential re-organization (Wang et al, 2003).

Forest and lee, (2003) believed that it is appropriate to re-assert significant domestic architecture in social change. Since how domestic architectural system operates remain a key determinant of the quality of life. And the quality of life here refers to both its individual and collective aspects. The wider residential domestic built environments are a pivotal element of the daily lives experienced. Hence, domestic architecture in whatever cultural context remains one of the most visible and potent determinants of social change, participation or exclusion.

Rapoport (1969) argued that the variety of domestic styles of buildings return to the primary determinants which are series of socio-cultural factors which have to do with the ethos; the values and responses to basic needs, family, the position of women, privacy and social intercourse. He determines the particular way a culture builds its houses. But, now the cultural transformation (change) from archaic culture to modern culture and to naturalistic culture has led to two basic paradigms. Frampton (1992) transformation of urban spaces occurred due to unprecedented technical and socioeconomic forces. Such forces have multiple repercussions.

Al – Attar (2002) identified development as growth plus change. As conceived it involves an increase in national income, a rise in standard of living, adopt new technology, gain participation in development processes. Also new skills and socioeconomic reforms establishment of new institutions and broader participation of the masses in development processes too. But development in building environment or domestic built environment is growth and change in the built environment. As domestic built environment develops due to developmental variables, it transformed into urban centers'. This development process leads to urban change (transformation) due to urbanization this alters the domestic architecture of the people.

A domestic built environment may experience cultural and social changes due to urbanization and urban change. So the re-engineering of a single space like a hut, arcs, etc. into a home, dwelling, houses, family compounds and even palaces is the direct consequence of urbanization.

3.2 Home Form and Design

Design can mean different things, to different people. For architects, it can simply mean designing buildings that are responsive to their context (D. Walters, 2005). Brandel (2000) said the way we build houses reflects our culture, our values, our orientations to the land, whether we move often, we work with the land or live in large or small groups.

House form results from physical forces or any single causing factor, but causes a whole range of socio-cultural factors seen in their broadest terms. Form is by climatic conditions and by methods of construction, materials available, and the technology. Rapoport notes the socio-cultural forces as primary and all other forces as secondary or change. (Tucson, AZ, UA Student Union, March 4, 2008). William (2005) explaining the architectural order said domestic architectural models include —mechanics of culture as species, that is people in space having cultural rules and being cultural (Hall, 1977).

Rapoport (1969:47) observed that given a certain climate, materials, the constraints and capabilities of technology. What decides the form of a dwelling, molds the space and their relationship are the vision that people have of the ideal life Socio-cultural factors influencing the house form include basic needs, position of women, family, privacy and social intercourse. (Rapoport, 1969:61). Rapoport further observed that the impact of socio-cultural forces on house form differ according to the way people understand these forces and their existence and importance in the society. Thus, according to him the nature of man and his institutions contain elements of both continuity and change, which affect the built form.

Rapoport (1990) emphasized important the comparison of different built environments within a given cultural context. He argues that there are elements of built environments which transform and others which persist over a long period and change. Also, he relates important elements to their change and observes that if the elements are transforming they are less important than if they are changing or not changing at all. Rapoport notes, however, that some retained elements are sometimes transformed to conform to economic, political, technical and other values.

3.3 Traditional Versus Modern Houses

Traditional houses are built with local building materials, which are collected around the village. Houses are built by members of the household and craftsmen often with help from friends and neighbors. Both technology and tools used are simple. Specializing in the traditional houses enriches the technological resources as each craftsman passes on what he learns, and adds to the store of know-how (Oliver, 1990:148). The change from traditional to modern building materials symbolizes transformation and cash economy. Therefore houses are built with producing building materials like concrete blocks, corrugated iron sheets and concrete tiles that require financial resources to purchase. Why people are transforming their houses from traditional to produce building materials? Taking into consideration the use of —modernl building materials and therefore an aspiration to have —modernl houses, they related to the change to an urban lifestyle.

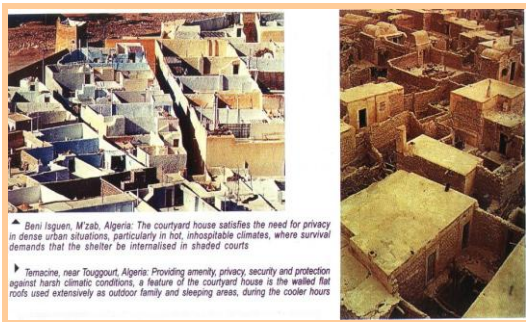


Figure 2: Courtyard Houses (Source: Derck Thomas: 2002)

3.3.1 Traditional Houses (Courtyard Houses):

Much favored in the harsh climates of Africa and Asia, the courtyard house has met the need of cultures, where socio-religious practices are different to those in the west. However, this house form has more received increasing attention in other contemporary contexts such as Alexander's housing in Lima, Peru, research at Cambridge conducted by Martin and Marsh (Colquhoun:1999).

The courtyard house as an alternative housing option, the courtyard house in an efficient and versatile planning form. It satisfies the need for privacy in dense urban situations, particularly in hot, inhospitable climates, where survival demands that the shelter be internalized in shaded courts (Derck Thomas: 2002; 107).

The courtyard house providing an amenity, privacy, security and protection against harsh climatic conditions, a feature of the courtyard house is the walled flat roofs used as a door family and sleeping areas, during the cooler hours (see fig 2).

The floor plan of this house type is composed of scattered rooms and divided into two separate parts: the front part, the shallowest and directly linked to the street, is the male domain; while the back and the deepest from the street level, is the female domain(Osman, K. M. & Suliman, M. M. (2005).



Figure 3: Modern House (Residential complex, Doha). Source: Tarek Abdelsalam a,*, Ghada Mohamed Rihan b,2012)

3.3.2 Modern House

Modern Architecture evolved less than a century ago. Its task was to reconcile an idealized vision of society and to rediscover the „true“ path to architecture. It was about creating architecture that embodied the ideals of a distinctly modern age. This encompassed the works of architects who lost confidence in tradition and rebelled against it. They believed the traditional forms of architecture, and daily lives were becoming outdated, thus modern architecture became create an authentic style, a „contemporary“ style, making drastic breaks from the past and suiting the needs of a modern industrialized society. The notion of „antiquity“ therefore became increasingly implausible (Ncube Chiko,)At the second half of the last century a new architecture

(labelled as modern western or international architecture) spread through the Arab region see fig (3).

Modern domestic buildings exist in diverse style, yet there are common features. For instance, they accommodate, in their design the traditional courtyard which might induce changes in the pattern of domestic family life. However, many people are attracted to this new architecture since it is a modern innovation and represents technological achievement. The majority of architects, and academic of 3rd worlds, including Arab region, have adapted the new western architecture.

“Modernity” for May thus meant create a new unified metropolitan culture. A notion like this implies dominate a programmatic concept of modernity. Rationality and functionality were the qualities that were given first priority. “Rationality” in this context should be interpreted in a broad sense: what May and his associates had in mind was a culture that anticipated a future society, rationally organized and conflict-free, made up of people with equal rights and common interests) (Horkheimer and Adorno, 1990).

An openness to everything that is mobile and transitory is another feature of the new form of everyday life: Because the outside world of today affects us in the most intense and disparate ways, our way of life is changing more than in previous times. This leads us to layouts, spaces, and buildings of which every part can be altered, which are flexible, and which can be combined in different fashions. { Heynen ,Hilde 1999)

4. Organization, Use and Meaning

4.1Mening of Domestic Spaces

The concept of domestic space is multi-dimensional a set of definitions and leading categorizations describing representations and practice with several limitations (Mallet, 2004).

The term domestic routine refers to the daily – rationalized behavior-concerning eating, sleeping, socializing, cooking v g... act around the home. Understanding everyday activities enable people to know their place in the society Domestic space used either concentrates on spatial type, the physical boundaries that frame the spaces we use, or on the cultural and

behavioral codes. These concentrates determine the way space is organized, used, and claimed within. The house is an integral part of our culture and the study of families within the house is important in assessing or re-assessing the design process. Besides in relation to the wider cultural, anthropological and sociological aspects of life itself. Integrated approaches and methods for assessing space organization and use attempt to contribute to knowledge and understanding of spatial and social practices within the home (Asquith, 2008).

The order in which activities occurred, by whom, for whom and with whom, where and at what time of day they occur. Rapoport (1997) classifies the domestic environment as a system of activities (action patterns) occurs in the setting (i.e. The physical milieu which incorporates certain rules). The setting can be identified with the activities that occur in them (e.g. Bedroom). A single space can accommodate over one sitting either with a combination and overlaps of activities or changing.

“Domestic routines are defined by, and simultaneously define, relations of hierarchy, authoring and affection within the house” Padre E.J (1997)

4.2 Domestic Space Organization, Configuration and Lay Out

The physical, social, cultural and economic characteristics of the houses can be affected by the users' preferences. These characteristics are closely related to the socio-demographic structure, lifestyle, and spatial behavior, functional use of spaces and planned period of residency of the user. These parameters affect the user's spatial behavior, even though the syntactic characteristics of the house remain the same (Peter C. Dawson, 2011). There are four aspects determining the relational fix within a dwelling layout:

Relationship of usable area and general spatial configuration

Circulation in relation to rest of spaces in a dwelling.

Accessible adjacencies (i.e. doors, openings, ect. Between rooms or spaces Orientation and daylight relationships.

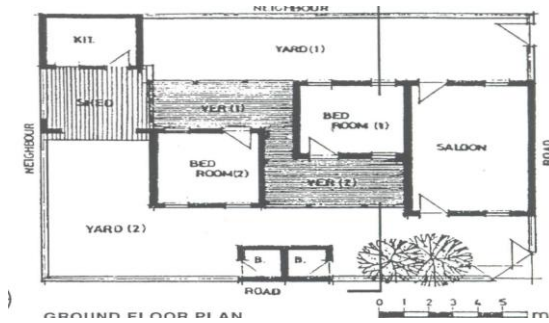


Figure 4: Single family house Alzuhur Neighborhood (Source:H.E.Kramel,1995)

Penn (2008) suggested that the geometry and network topology of spatial patterns formed by the built environment has a direct impact on patterns of movement. So to-presence and interactions between people. (Penn, 2008). What characterizes network of spaces is the circulation system. Therefore, this shows how space and the layout of every home have a significant impact on the lifestyle of the inhabitants.

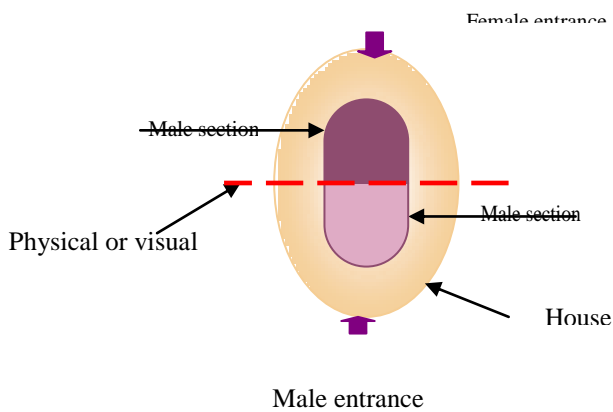


Figure 5: Division of the house into male and female domain (Source: Author)

4.3 Guests' visits and social interaction:

The percentage of guests that stay for over one hour in a day is more than 50% therefore, provide the guest bedroom within the guest receiving area is recommended.

Exit of guest each sex sites in separate places. Male guests who are relatives might be received in the family section among some of the young, educated couples the trend is changing. Whereas

female and male friends are received in the same place (see fig 3).

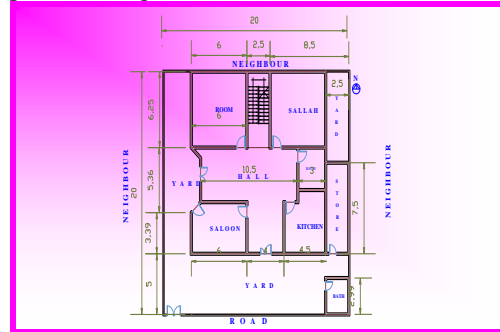


Figure 6: Lutfi house, Hai Alomda
 Source Author

5. Classification of House-Types

For this study it is important to decide on how to classify house-types in domestic built environment. There are different ways of classifying house-types. Lawrence (1994) for example, stated that by an analysis of architectural plans followed by site visits it is possible to classify house-types. He provides several criteria that may be used for house-type classification. These include:

- Stylistic conventions related to compose of building facades (e.g. Classical, neo-gothic, modern). These criteria account for the explicit professional knowledge of an architect and a builder, which is recorded in pattern books or other professional publications.
- Socioeconomic variables related to the income and professional status of the inhabitants (e.g. Working class or middle class, blue-or white-collar workers)..
- The number, size, layout of dwelling units on each floor level of residential buildings (e.g. Two or three rooms, although floor plan or one façade with fenestration). These criteria are used by architects, property owners and estate agents to classify and assess urban
- The layout and construction of the buildings (e.g. Timber framed, brick or stone walled) which is not used by professionals to interpret the nature of physical boundaries, but also by lay people to attribute social values to residential buildings.

e) The spatial organization of the floor plan in relation to the means of access from the public realm of the street to the private realm of each dwelling unit (e.g. Passing through a private outdoor space, a shared external space, and/or an internal space (Lawrence, 1994:276).

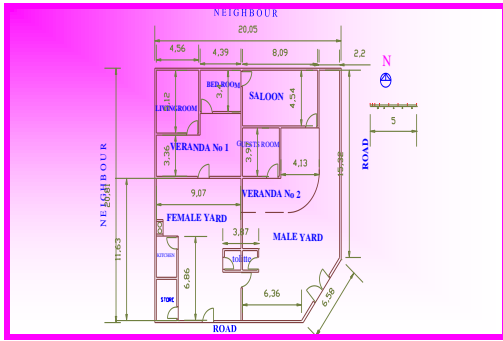


Figure 7: The use of spaces in nuclear family section (Source Author)

The Traditional House

The study labeled it as “traditional” because it shares similar features with the indigenous mud dwellings of rural Sudan. Inheritance is the main source of gaining a “traditional” house; and it accommodates over one generation of families, who either share their daily domestic life. The floor plan of this house type is composed of scattered rooms and divided into two separate parts: the front part, the shallowest and linked to the street, is the male domain; while the back and the deepest from the street level, is the female domain. Khadiga, M, Osman and Mamoun, M, Suliman.

The buildings and surrounding courtyards fulfill their function of providing living space for all the different activities within the house in a suitable environment that characterize the climate. Traditional rituals are not accommodated for but rather are in an open space that remains empty after the people have dispersed. These kinds of habitation patterns are made possible by the climate. It also represents a memory of the cultural traits of the spatial freedom of mobility of the nomads (Kazimee and McQuillan 2002; p. 28). Similar to other Muslim contexts the courtyard plays a central role in daily life, not in the home but also in public

buildings. Nomadic patterns are still evident at all levels and traditional sedentary patterns of life. Kazimee and McQuillan (23) in Afghanistan, describe this as ‘co-existing modes of living’.

As implied above, housing transformation is one of the major impacts of all forms of urbanization. The term ‘housing transformation’ is used here to refer to informal, extra-legal and unplanned Processes through which homeowners extend their houses, erect additional rooms or convert part of their homestead into rental accommodation. It is similar to ‘rooming’ or multi-habitation – that is, “a situation in which people who do not define themselves as one household share a living space that is not designed for multi-family purposes” (Schlyter, 2003:7).

Housing transformation has attributed to three major factors: restrictive or inappropriate state policies, rapid urbanization and failures in the formal housing delivery systems.

6. Result and Conclusions

A. Division of the house into male and female domain

The studied houses are divided into two sections, male and female/family section. The reception room, for example, is not used by females at all, men use some of the rooms for relaxing during the rest time. They use the back yard when entertaining with the family. The kitchen is used by no males. Females used the back yard in the morning and evening, and they use the verandahs or hall when they have their meals, receiving their guests. The front yard is a male area.

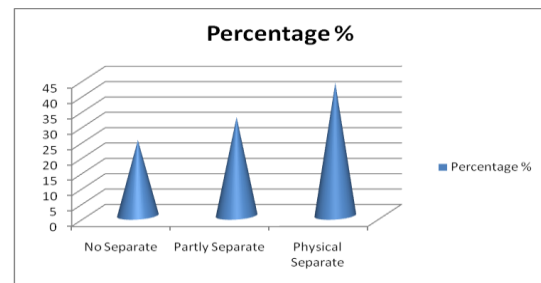


Figure 8: Separation between male & female section (Source Author)

figure (6) obvious that the majority of the sample size (43.3) % Separation between male & female section (Physical Separate) and (32.1)% (Partly Separate) and (24.6)% No Separate.

B. Public and Private Spaces

Public and private space in domestic architecture is important because the study has shown that in the process of their transformation, developers use any available space to increase indoor space to the detriment of outdoor space. Therefore, a need to study and come up with a layout to define public and private space in domestic architecture. This Could be done in a participatory manner and be approved by both the affected people themselves and local government.

C. Privacy

Privacy is one of the fundamental issues valued by most households interviewed. Privacy proved to be a multi-faceted issue, which forms part of a culture. There is a need for in-depth study in relation to privacy, taking into consideration changes resulting from urbanization in poverty.

It's clear that, in Omdurman town domestic privacy is a paramount importance where for females. This amounts to absolute seclusion in house in Omdurman traditional houses there are two sections, one for the family and female guest and while the other section for male (saloon).

Sudanese Way of life, constancy and change:

Sudanese families have their cultural and heritage in achieving uniqueness for the two sexes; they have also their customs and socialites which require performance of some activities in the hosh. So that most families prefer living in a house with a courtyard besides its environmental adaptation.

Sudanese families and in 3rd class areas usage of outdoor spaces in the house are not defined, set aside for one specific activity, or without limitation to a single activity. That is the opposite of what happens in families with higher standards in cultural and social aspects.

The problem of using hosh abandonment, except because of air-conditioning by some families and this linked to economic conditions of the family and large numbers of mosquitoes in the hosh at night and the increasing number of thefts at

night. The use of hosh is linked to cutting of electric current or social occasions (marriage, death) in the house

Transform in the courtyard is most amazing change above all. Now initial function lost, but secondary function, clean-dirty distinction that gained through long practice, has transferred to the contemporary homes.

Until the 70'S Omdurman's traditional courtyard house-type, prototyped to be the typical domestic life, has three morphologies of the open space, semi-closed and closed spaces. The housed components of 4-2 blocked with distinctive spatial separation of service units (kitchen, toilets, bathrooms, and stores) room the main building block. In the corner of the court, to be as far as possible from the habitable rooms to use the existing boundary walls. Now the morphologies of houses have over shadowed by the contemporary house-types which have taken the prime position.

In the post 70 'S the reinforced concrete buildings appeared with more compact building form, integrated service rooms, large area open spaces and gardens. The house of this stage is a semi-central compact form buildings with a clear concept arrangement of family and guests in most cases studied. Which reflected upon the spatial configuration of the house. Also, there is a separate saloon or sitting guests' room with a separate bathroom for guest so as to keep the guests in privacy away from the family section. For instance, observe the space segments like space for cooking and eating, storage of household goods, space for visitors, space for toilet and bath has remained and continued as part of a house, but the position, location, organization, size and meaning have changed thus affecting the house pattern and design.

8. Discussions

Perhaps what promote our discussion in this study is the increasing number of giving up the use of the Hosh in Sudanese houses. Why did abandonment of Hosh increase? What are the reasons that lead to this?.If the reasons are social reasons they either came about because of breakdown of social relations and links in the family because of the rhythm of the modern age in this century. It became very difficult for the

inhabitants to group together at home during the night, the father and the son return late from work to their home.

Now a day many families have late Dinner meal time, which had reflected on the relationship between family members as poor financial resources and low income forced them to spend a lot of time at work.

Sudanese town Until the 70'S is more livable and satisfies many perceptual needs better than present-day towns. I agree Rapport when suggests that the house retains its validity and usability long after the culture or way of life that created them has changed.

Globalization contact, economic growth, changes of subsistence, technology variables affecting the house pattern and design, for example open kitchen in Sudanese domestic spaces.

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