

A Survey on Privacy of Residential Life in Contemporary Apartments in Iran

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Abstract

Housing design has always been a crucial subject of architects' concern. One of the most important aspects of housing design is the amount of privacy that like security and peace, is one of the rolling factors that effects housing forms. The role of value of privacy in shaping Iranian culture is vital. The shrinkage of the design layout in the current Iranian compact dwellings has threatened the appropriate level of privacy. The aim of this study is to establish a framework to improve spatial organization of modern Iranian high density vertical development housing through investigating on the apartment layout in the contemporary apartments of Iran from privacy perspectives. In this regard, to reach the aim through qualitative approach and case study strategy, this value of the Iranian traditional housing was investigated. To achieve this goal, this study has used survey method by distributing questionnaire for the purpose of access to privacy of residential life zones. For this purpose target statistical community, dwelling inhabitants are about 80 to 100 square meters. 3 groups and 45 persons of inhabitants of residential complexes have been chosen. The discussion can be considered as a beginning for investigation on zone of privacy in contemporary housing.

Key words: Privacy, Culture, Traditional housing, Iranian contemporary housing, Hierarchy

INTRODUCTION

The word "house" maybe is regarded as the most significant word to understand the concept of living and it must be evaluated at different cultures. In the conundrum of culture and at different ages, this word denotes common concepts and sometimes multiplied; until today, which this word is applied has become devoid of its main concepts. Understanding meaning of this word and its antonyms can be an open door to know better the architectural culture of Iran regarding house and settlement, and elaborate discussion on this issue is out of the scope of this study. However, it must be added that the diversity of meaning and concept of the house shows the extreme significance of house in Iranian culture (Barati, 2003).

House as a shelter, from the early days of humanity has been a worthy place, each culture and race has grown up

under this shelter. Dwelling has always been such a fusion of living habits, environmental conditions and cultural boundaries. The meaning of dwellings has been studied from many different perspectives such as psychology, phenomenology, sociology and environment-behavior studies (Després, 1991) (Mallett, 2004, Moore, 2000). Martin Heidegger said that building and dwelling are a single phenomenon, the creation by the individual consciousness out of its rootedness in culture, time, and place (Heidegger, 1993). Yusuf Al Qaradawi, the Islamic researcher, defines the house as, the area that each person protects himself from climatic discomforts and feels free and relaxed toward outside of the house (Al-Qaradawi, 1960). This definition or function of the house is based on many Qur'anic verses, such as, 'It is Allah who made your habitations homes of rest and quiet' (Qur'an, Su. 16:80) The modern housing of Islamic societies has been criticized by many researchers for not in accordance with people needs and ignorance of socio-cultural parameters in design of houses (Abu. Gazzeh, 1995, Al.Kodmany 1999, Bokhari 1983). One of the most important principles which are considerable in Iranian and Islamic traditional architecture, especially after Islam, is the principle of privacy (Pirnia, 2005).

Also In the past decades Tehran is experiencing the highest rates population explosion and the demand for

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new apartments and residential units are also escalating. To satisfy such a demand one of the issues that is neglected is systematic study on cultural needs and real requirements of the residents. One of the essential issues that is not giving minute attention in housing design is privacy.

Privacy has always been a very important factor in Persian families. Iranians families today tend to live a double life, one that unfolds in the trusted quarters of the household and another in the public sphere. Due to a combination of culture and religion, Persian families tend to be very private about the goings on in their household (Sohrabi Mollayousef, 2015). Privacy is one of the human's primary requirements in dwelling. According to MichelGeorgiou "it's clearly obvious that the concept of privacy has a general definition, privacy is a property of built environment that has been considered for many years. Having specific domains for each person or a group of them has been one of the primary concerns of people (Georgiou, 2006).

The element of privacy in the Iranian society cannot be taken lightly in every day life especially in housing design. The Muslim society tend to ignore the importance of privacy and taking the western civilization as a model of modernism. Some researchers believed that the transformation in life also demand a new requirements in designing of the house so that the residents can adapt with these new conditions especially in the city centre. Needless to compare with the tradition of the past, the rule of women has changed in the society and the traditional houses can not survive the present requirements. However, the idea of privacy can not be replaced with efficiency and physical aspects of a comfortable place alone. In this condition, there is a need to examine the potential of analyzing the contemporary needs and requirements with Islamic aspects of privacy elements.

The family name and honor are sacred and all members make a conscious effort to keep private the affairs of the family. The emphasis on privacy in Persian culture had a marked impact on the architecture of traditional houses, and led to the creation of physical divisions in the house to create privacy within the domestic sphere too. A typical Persian house contains multiple divisions, including open, semi-open and closed spaces (Tahir M, 2011, p.273-287).

According to Shabani, traditional Iranian houses include two types of privacy. One is privacy from the outside world, and the other is privacy within the household that requires physically separated spaces inside the residence (Shabani, 2011, p.273-85). A traditional Iranian house is comprised of two parts: *Birouni* (outdoor) and *Andarouni* (indoor); this

separation arises out of privacy considerations. According to Haerri, the *Andarouni* is private indoor space for family members and the *Birouni* is a more accessible area where guests are welcomed upon entering the house and then guided toward to an area in the *Andarouni* section (Sohrabi Mollayousef, 2015) (Figure 1).

Privacy as a cultural value is much related and influenced by the physical environment where people live in (Rapoport, 1969). From this point of view, this study will highlight the important principles relating to cultural value of privacy found in traditional Iranian housing and establish a framework for designing better spatial organization for modern Iranian housing. This is because the Iranian traditional housing portrays excellent evidence of how housing spatial organization are shaped by the values of privacy (Ardalan & Bakhtiar, 2000). This paper is a position paper within a larger study attempting to determination of the better relationship between Iranian cultural values and spatial organization of Iranian middle-class high density vertical development housing. In this regard, two cases of study in terms of middle-class Iranian traditional and modern housing have been selected. To study middle-class traditional housing, the Taj house located in Kashan, Iran as the most common ordinary and excellent conserved original middle-class traditional housing was chosen. Additionally, to find the privacy problems faced by families within middle-class Iranian high density vertical development housing, three blocks of this type of housing located in the new town of Parand, Iran as the symbols of the future trend of Iranian architecture (Kalantari Khalilabad & Eskandari Noudeh, 2008) were selected.

This paper has been divided into five sections. It starts by providing a theoretical framework introducing some related theories and perspectives in terms of culture and its' values and principles. The next section describes the concepts and foundations of traditional Islamic-Iranian architecture and especially housing to develop a critical concerning of the Iranian principles toward achieving desire privacy. This section includes three subsections to describe some important physical principles of traditional Iranian housing toward obtaining privacy. The following section discusses the aim, research methodology, and data collection methods and procedure. In addition to, the selected cases for study and related sampling strategies will be clear in this part. The forth section of this article includes the analysis procedure. The last section of this paper is the part of conclusion and recommendations which includes the conclusions of the study and proposes some recommendations to improve spatial organization of middle-class modern housing through lessons learnt from traditional Iranian housing in terms of the value of privacy.

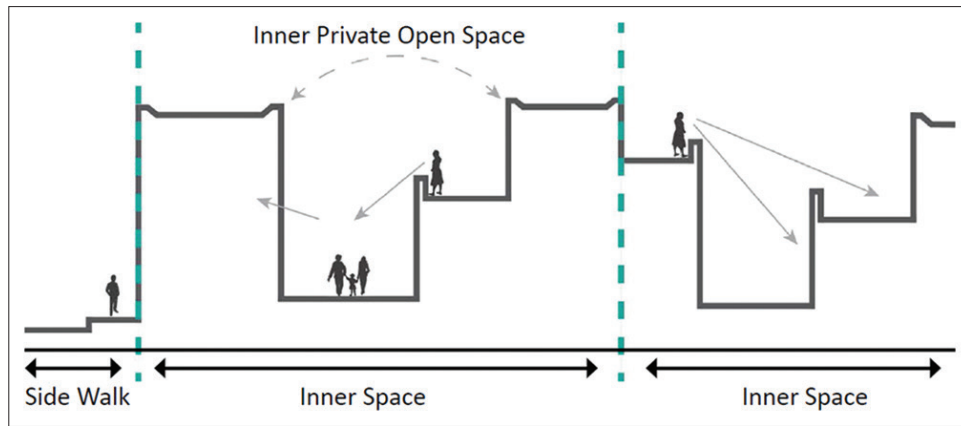


Figure 1: The view direction and limitation of visual access between each houses and sidewalk. Source: Redrawn by Sepideh Sohrabi Mollayousef, original source of section is Mortada Hisham taken from: "Achieving Privacy in the Iranian Contemporary Compact Apartment through Flexible Design"

RESEARCH AIM AND METHODOLOGY

The aim of this study is an investigation on apartment layout in the contemporary apartments of Tehran from privacy perspectives and a study on zone of privacy in contemporary housing and seeking a framework to improve spatial organization of modern Iranian high density vertical development housing through investigating on the apartment layout in the contemporary apartments of Iran from privacy perspectives. This research relies heavily on survey method with qualitative view. This qualitative research seeks to identify the cultural values of traditional Iranian housing in terms of features of privacy.

To achieve this goal, the information was gathered from 3 main groups, 45 questionnaires on how the occupants react towards the element of privacy in different apartment layouts. This study has used survey method by distributing questionnaire for the purpose of access to privacy of residential life zones. For this purpose target statistical community, dwelling inhabitants are about 80 to 100 square meters. 3 groups and 45 persons of inhabitants of residential complexes have been chosen.

This study will use the learnt values as a guideline to improve the quality and spatial typology of the middle-class modern Iranian housing. To increase the accuracy of findings, the data collection methods through triangulation are a combination of direct observation, open-ended expert interview, and taking photo for traditional Iranian housing and direct observation, semi-structured single face to face, semi-structured focus group interviewing, and taking photo for collecting data from modern Iranian housing.

PRIVACY IN IRANIAN TRADITIONAL HOUSES

Studies on Western forms of privacy, revealed differences in practices and conceptualizations arising from age, gender, social class and other factors that may influence the perspective of privacy. Better understanding of privacy need to explore the cross-cultural, and interdisciplinary inquiry of the said society (Alshech, 2004). It is well documented that, in Muslim societies the Holy Quran and the tradition of the Prophet (sunnah) are the basic sources to be followed. With regards to the architectural design, neither the Quran nor the Sunnah can provide a detailed codes of house design and construction, as long as the house designs do not conflict with shariah (Mortada, 2003). With respect to the concept of privacy in Islamic perspective it seems that individual freedom is circumscribed so as nobody is permitted to harm other members of the community, it means that community do protect and empowers the individual. Generally, Islamic law categorizes gender relationship within the two categories of lawful and unlawful mahram. The word "mahram" defines the legal relationship between the male and the female either by marriage or close blood ties. Any person outside this lawful area of mahram is stranger. Sex separation is part of the Islamic system and Islam disapproves of free mixing between unrelated members of opposite sexes. By this categorization also, Islam confines the privacy boundaries of individuals.

In particular this emphasis (on separation and category of relationship between men and women) is the most concerns of Islamic scholars in order to show the effect of privacy in housing design. For example, the stranger is prohibited to enter other's houses unless he is permitted by the owner.

The family is the main concern in privacy particularly the protection of female members from the eyes of male strangers. The consideration of The Holy Quran shows that, separation and shield of the domicile from public domain is emphasized and boundaries between the open public sphere and protected privacy is defined and required in Islam. On the other hand, privacy according to the Islamic principle is an affiliation of principle upon a Muslim to separate his or her secluded private life from public intercourse.

With respect to Islamic rules, the traditional architecture was the product of Islamic beliefs and values of the inhabitants. The Iranian traditional architecture like other Islamic domains was responsible to the residents culture and the privacy of individual and his family as maintained in both houses and neighborhoods. Seyfian and Mahmudi 2007 believes that privacy in Iranian architecture comprises of two concept of security and respect to others right. Hence, this concept and the climatic reasons became the basis of the organization of the spatial layout of the neighborhood and houses in Iran.

Hierarchy is one of the most important characteristics of Iranian traditional architecture that provides privacy. It deals with separation of the different domains from public to private. In fact there are three main recognizable transition zones in traditional cities i.e public, semi.public, and semi.private domains. The movement patterns and their diminished size from public to private stressed on changing character and function of domains. In addition, the neighborhood gateways were stressing the penetration of successive level of public or private life. This hierarchalmovement pattern provided the separation between the most private zone of city 3 the house and public domains like bazaar and other public spaces.

This hierarchy is also recognizable in traditional courtyard houses that provides the highest level of privacy for residents. A courtyard house is a type of house where the main part of the building and all living areas are disposed around a central courtyard. Besides the climatic reasons, this inward looking houses were organized to provide a private and personalized space for the house habitants. In these inward looking houses residents felt free from the outsiders and the family activities took place without encroachment of strangers. The visitors could not see the inside of a house from the alley when the door was open. It was provided by the hierarchal movement pattern of the entrance elements. In this system, the gradual movement from the entrance into the centre of the house (from the semi public space, the alley, to the most private part of house) is recognizable. In order to access the house spaces,

it was necessary to pass from pre-entrance, entrance, vestibule, and corridor in order to get into the court yard. Thus the visitor do not have any view into the courtyard as he passed through the corridor. This indirect and hierarchal movement pattern satisfied the highest level of privacy for residents.

The study of Iranian traditional houses reveals that these houses were built in accordance to the religious and cultural requirements of their residents. They satisfied the highest level of privacy and regardless of the size of house or the social position of the owner when similar architecture principles were applied to achieve the acceptable and comfortable habitats. But some cultural values were lost during the modernization of Iranian cities and in the rush for modernization such issues as efficiency and affordability were substituted with other simple criteria deemed to suit the Islamic culture of Iran.

RELIGION AND CULTURAL VIEWS IN PRIVACY OF IRANIAN DWELLINGS

Privacy was one of the requirements that people were always perusing due to their cultural beliefs and religious practices. The traditional Iranian house is the combination of several different open and closed spaces that were designed to articulately mingle the nature and life space together. This combination, by concentrating on the spatial figures and the ability of movement and circulation, tried to create a useful space for dwellers. According to Westin privacy is a territory of individuals or groups that decide on the extension of how much of their life they need to share. from another point of view privacy is the voluntary and temporary withdrawal of a person from the general society through physical or psychological means, either in a state of solitude or small-group intimacy or, when among larger groups, in a condition of anonymity or reserve.” (Westin, 1967).

Islam recognizes the right of every individual to be free from undue encroachment on the privacy of his or her life. Therefore, the privacy of the house is significantly stated in many places in the Qur’an. For instance, a verse says, ‘O ye who believe! enter not houses other than your own, until ye have asked permission and saluted those in them’ and, ‘if ye find no one in the house, enter not until permission is given to you. if ye are asked to go back, go back: that makes for greater purity for yourselves, and Allah knows well all that ye do’ (Qur’an, Su. 24:27, 28). The following sections discuss the privacy of the Muslim house, which can be divided into two categories: visual and acoustical.

RECENT YEARS IN IRAN;THE COMPULSORY CHANGE IN LIFE STYLE AND DWELLING TYPES

It is clear that every city changes over time but suitable policies and tools are necessary to control the development of cities in a sustainable manner. However, in order to define which sustainable urban planning strategies should be adopted, it is essential to fully understand the factors that caused buildings to be such houses in such a way.

In the last century, thousands of new houses, apartment units and buildings have been constructed in Iran. In particular, the Iranian cities have expanded enormously and their great old structures have complemented by the massive new urban developments. Unfortunately the cultural identity of many historical cities have been changed by undesirable apartments and different unsuitable buildings. The changes took place in different periods in which social, economic, and technological transformations caused physical and morphological changes.

Modernization in Iran has led to many social, cultural, and physical transformations. However, these changes concentrated on the physical or external aspects of life, leaving unchanged most cultural norms and values that constitute living habits. Cities grow, careers are more professional, therefore everyone needs to have his own house near their offices. This has led to the phenomenon that large families who used to live together now opt to live in their own private houses.

In the recent decades, apartment buildings became prevalent. In this new type of residence, the physical characteristics of the house have changed considerably, while living habits and lifestyles have not changed at the same pace. In this period, traditional houses were largely abandoned while apartment buildings became more prevalent. In the new type of residence, each household had smaller living areas and a shared courtyard (as opposed to the individual courtyard of traditional houses), which belongs to all families living in an apartment building.

New building regulation, which allows buildings to cover 60% of the land parcel and left 40% for open space, had a great effect on the spatial organization of houses as well as on urban design. The central courtyard is now located in the front and multi-storied apartment buildings became the dominant type of preferred housing (Soltanzadeh, 2005).

The biggest change was the assignment of single functions to the living spaces, transforming the multifunctional character of the room. The living room was dedicated for

daily activities, the guest room for accepting relatives and friends, bedrooms as personal spaces, and kitchen, bathroom, and toilets for services (Soltanzadeh, 2005). This new type of residence introduced modern facilities for more comfortable living, but departed greatly from the familiar traditional houses.

According to Darab Diba, since the Revolution of 1979, Iran's population has double. Iranian cities have grown, especially Tehran (from 1.5 million in 1956 to 2.7 million in 1966 to 6 million in 1986 and 12 million in 2002). In the past two decades, a variety of highly hybridized cultural forms have appeared on the Iranian urban landscape: Iranian-Islamic, Iranian-Western, Islamic-Western, and Iranian-Islamic-Western. These forms marry Islamic-Iranian motifs and ornamentations to Western traditions (Diba, 2003).

According to Madanipour, the changing of patterns of the building form, from an Inward-looking, Low-rise Courtyard House to an Outward-looking, Medium-rise House with a Courtyard, and High-rise Apartment, the new style has been responsive to the country's increasing housing needs. However, it has also contributed to a congested environment lacking adequate planning and larger social considerations for environmental sustainability. It is obvious that increase of land price and population and the houses areas do not respond to some requirements, such as privacy, while there is not enough space to create them. Today, most new high-rise housings in Tehran resemble piled up boxes very much like those found in the inner cities of the West. According to Haeri, Analyzing different types of contemporary architecture shows that living spaces are divided into two groups in terms of the spatial organization aspect: separated and combined areas, which are described as following (Haeri, 2010). Combined spaces: These types of spaces cannot be defined clearly and this is due to the unclear district of entrance, dining room, or living room; since such functions are merely divided by furniture. In addition, there is no view or day lighting potential for this part of the house. The only function that might be different from other parts and might have an independent spatial quality is the kitchen. Kitchen besides having the view and lighting has the potential to be flexible and expand to other areas. In some examples patio can be in this category and can provide the natural light besides the view. As far as un-expandability of these spaces is concerned, there cannot be a specific definition for them. Separated spaces: Besides living rooms, dining room, and relevant spaces, there are some spaces that are not firstly visible and are separated by walls and partitions. These spaces such as bedrooms, bathroom, or toilets, are not combined with other spaces.

PRIVACY IN CONTEMPORARY APARTMENT IN IRAN

In spite of the importance consideration of people requirements in design of housing, the related research shows that the focus on user characteristics and their spatial requirements in housing design is essentials. There is also a lack in consideration of match or mismatch between apartment layouts and users spatial requirements in the contemporary architecture of Iran. This paper specifically focuses on privacy requirements and needs in modern housing of Tehran by analyzing the modern apartment layout in Iran with privacy perspective. Vaziritabar (1999) points out that there are five kinds of privacy is considered in housing study: i.e. Personal privacy, that deals with privacy of every individual from the other family members. Family privacy which is a kind of privacy deals with privacy of family members from non family members and its relationship between private life of family and friends, guests and etc. and it also concerns with separation of the private life of family members from the others. Intra family privacy that deals with the privacy of activities of family members inside the house. Visual privacy that this kind of privacy deals with the visibility of the family members from the outsiders. Neighbor privacy that this kind of privacy deals with privacy of family members from their neighbors and urban privacy that this deals with the privacy of family members in the neighborhood. It also deals with the desire for living in crowd or more private types of thoroughfares. Auditory privacy concerns with privacy of residents from noise of surrounding environment of home. Hence by considering the different kinds of privacy this study deals with personal privacy, family privacy, intra family privacy and visual privacy. Regarding to the goal of this study especially in visual privacy the windows and other apartment elements that are not related to the apartment layout are not considered.

The main goal of this study is to provide an approach for analysing the apartment designs as a basis of privacy. The study sets the following objectives: 1-To identify the design layout preferred by those households who desire a high level of privacy. 2-To examine the effect of houses layout on privacy achievement.

This research is qualitative in nature. The methodology of the research is focusing on the people believes and attention in the apartment layout. Questionnaire was used in the inquiry in order to get the user,s reactions. we use experimental method by distributing questionnaire for the purpose of access to general residential life zones. For this purpose target statistical community, dwelling inhabitants are about 80 to 100 square meters. 3 groups and 45 persons

of inhabitants of residential complexes have been chosen and asked to choose a number from 1 till 10 for every by consulting to other members of family (Figure 2).

Based on results of the questionnaire, 3 general residential life zones for apartment body are observed obviously.

To assure the reliability of questionnaire's results were distributed between 3 groups of 15 members and in 3 different time spans. The alliance between 3 groups was 0/77 so the reliability of the test was calculated 0/85. Stability coefficient in 3 groups in 12 space groups was about 0/71 to 0/86 which shows an acceptable stability (Figure 3).

Based on questionnaire's results and above mentioned divisions and based on studied done on this issue and also logical reasoning based on drawn plans, 4 main zone presented for residential apartments and this can show the highest level of privacy in iranian housing apartments. In the other hand, Questionnaires were divided into four categories: 1- Personal privacy, 2-Intra family privacy, 3-Family privacy, 4-Visual privacy. In other questionnaire, Participants were asked on how they feel about privacy in different apartment layouts (Table 1).

Respondents were asked on how often they wished to be alone when they are at home in order to find out their personal desirable privacy. 67% of the respondents wanted a high level of personal privacy especially when they feel too tired. For 23% it was less important. Respondents were also asked on how they achieve the highest level of personal privacy at home. 64% of respondents stated that when there is enough personal rooms. 10% of respondent did not answer the question and 26% believed they can feel enough privacy in a shared room.

The respondents were asked on how they think about the privacy achievement when the kitchen is open and not demarcated by walls. 55% of respondents answered that it decreases the level of privacy while 40% believed that they find such a design is comfortable and modest. 5% of the respondents did not answer the question. In relation to the kitchen they were asked on how they feel when the guests can see inside the kitchen while the owner is cooking. 48% of the respondents answered that they feel uncomfortable while 38% found it comfortable and 14% did not answer the question. About the position of the toilet they were asked on how they feel if the only toilet is located in the master bedroom. 74% of the respondents answered that it decreases the level of family privacy. Only 15% believed that most of the time their guests are their relatives and it does not matter if the toilet is in the master bedroom, and only 11% did not responded to question.

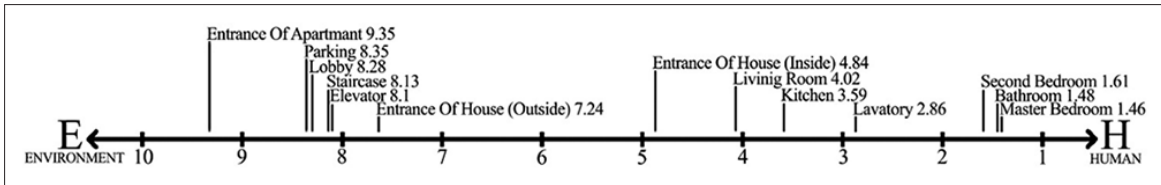


Figure 2: Questionnaire's results

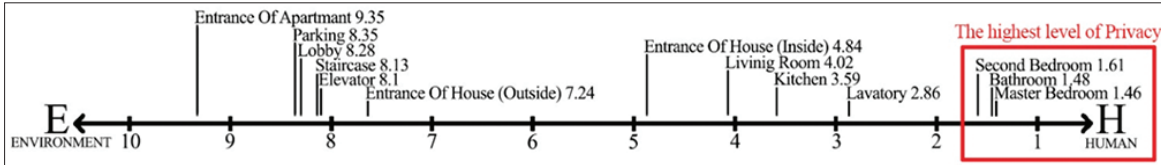


Figure 3: Questionnaire's results

Table 1: Adaptable study on questionnaire's results and spaces' setting by Vaziritabar (1999)

	Spaces' setting by Vaziritabar (1999)	Spaces' setting by questionnaire's results	Level of privacy by results
Visual privacy	Entrance of apartment	Entrance of apartment	0.65/10
	Parking	Parking	1.65/10
	Lobby	Lobby	1.72/10
	Staircase	Staircase	1.87/10
	Elevator	Elevator	1.9/10
Intra family privacy	Entrance of house	Entrance of house	4.17/10
	Living Room	Living room	5.98/10
	Kitchen	Kitchen	6.41/10
Family privacy	Lavatory	Lavatory	7.14/10
	Second bedroom	Second bedroom	8.39/10
Personal privacy	Master bedroom		
	Lavatory	Bathroom	8.52/10
	Bathroom	Master bedroom	8.54/10

The other question about the separation of the toilet for guests and the owner were asked, 65% of respondents found it comfortable while 35% of respondents found it impossible in the limited space of their apartments. The other question asked were on how they think if their apartment were designed into two separate zones with less private areas for living room, sitting room, and kitchen and more private zone for bedrooms. 71% of respondents believed that it provides a high level of privacy while 23% asserted that they do not find it necessary and 6% didn't answer the question. Questioners were also asked for having a separate room for guests. 78% of respondents believed it is not necessary and only 22% believes it would be more comfortable.

With regards to the entrance door, the respondents were asked on how they feel if the entrance door were opened to a transition space apart from a sitting room. 78% thought it help to increase the level of visual privacy. 22% believed that the entrance space is not necessary and stated that it could be used for another reasons specially for a very small apartments. The questionnaire were asked on how they feel when the apartment entrance doors are opposite to each other. 75% for the respondents asserted they feel

uncomfortable and 15% did not answer to the question. In relation to the location of elevator door, 84% of the respondents found it uncomfortable if it opens right in front of their entrance door, while 16% of the respondents did not answer the question.

Summary: The consideration of the results shows in the family privacy zone, the majority of respondents prefer a two main zones of less private and more private in their apartment layouts. They also prefer to find a transition space joining a different parts of house to in order to provide a hierarchy in design. The findings also show that although the life style is changing, nevertheless, the residents prefer the highest level of privacy as much as possible. Figure 3.0 summarizes the findings of the study in a graphical diagram. According to the people,s requirement the relation of different space of apartments is recognized in this table.

It is evident that many technological and cultural changes have been made in our countries duringyears and have had effect on many aspects of the human beings. Since these technologies facilitate life flow, theybring culture of the innovators, the culture which has imposed many damages

on culture and life style of the Iranian people due differences with Iranian culture. These physical and conceptual changes caused many changes in aspect of the house on the one hand and its internal space on the other hand. Change in physical geometry of house and importance of spaces, change in infrastructures, land size, low population of families, tendency to independent life and other cases had essential role in change of house. spatial model which is in contemporary houses is a surface model which deals with square meter and surface, the surfaces which have been embedded on the basis of limits, sizes and functions in order to meet primary biological needs (such as eating, sleeping etc) (Table 2).

In modern and contemporary period of policies and planning of the government and municipalities in the field of urban spaces, house building and mass production had effective role in culture of the contemporary house and progresses of science and modern technology increased human population and other traditional methods don't meet need of the human beings for house. Expansion of cities and urbanism resulting from industrial revolution and changes after that was accelerated and modern urbanism process caused different social model in terms of house building for the modern human being and contemporary human being. But modernity changes and their effects on human residence model were not limited to quantitative dimension of the population increase and increase in number of houses and habitats of the human beings but modernity and processes would have effect on quality of house of the modern and contemporary human being.

CONCLUSION

This article examined the impact of design on privacy achievement and it shows how the location of apartment spaces can increase or decrease the level of privacy. The findings of this study indicate that privacy as a focal Iranian cultural value plays a great role in spatial organization of Iranian traditional housing to response family cultural and religious needs. As the results, the sextet layers of privacy can be proposed. In contrary, because of neglecting the multi-pronged concept of privacy as Iranian family cultural value in the design process of middle-class modern Iranian housing, the settled families suffer from this architectural weakness. In addition to the mentioned problems, this neglect has had a negative impact on Iranian modern families' indoor and outdoor lives as the most important features of Iranian cultural and religious values. In this regard, this study suggests some recommendations learnt from spatial concept of traditional Iranian housing in terms of privacy to betterment the spatial quality of the modern middle-class Iranian housing.

In conclusion this study supports Vaziritabar (1999) hypothesis that privacy is related to built form. It is apparent that, in the privacy satisfaction in the apartment can not have all these criteria. The design of apartment in Iran need to consider the need of the occupants as well as the religious aspect of the concept of mahram as explained earlier in this paper. The provisions of modern design is restricted by the cost, space dispositions and the cost of the land in urban areas. However, it is the ingenuity

Table 2: Questionnaire's results

	Positive	Negative	No idea (%)
Visual privacy	78% of respondents believed that a transition space apart from a sitting room in entrance is necessary for privacy 84% of the respondents found it uncomfortable if elevator door opens right in front of their entrance door	22% of respondents believed that a transition space apart from a sitting room in entrance is not necessary for privacy	16
Family privacy	55% of respondents believed that open kitchen decreases the level of privacy 48% of the respondents feel uncomfortable when the guests can see inside the kitchen while they are cooking 65% of respondents believed separation of the toilet for guests and the owner is comfortable 74% of the respondents answered that existence of one toilet just in master room decreases the level of family privacy 71% of respondents believed that separation of private zone from public zone is necessary 22% of respondents believed that having a separate room for guests is necessary	40% of respondents believed that open kitchen design is comfortable for living 38% of the respondents feel comfortable when the guests can see inside the kitchen while they are cooking 35% of respondents believed separation of the toilet for guests and the owner is impossible in the limited space of their apartments 15% of the respondents answered that existence of one toilet just in master room does not matter 23% of respondents believed that separation of private zone from public zone is not necessary 78% of respondents believed that having a separate room for guests is not necessary	5 14 11 6
Personal privacy	67% of the respondents wanted a high level of personal privacy especially when they feel too tired	23% of the respondents said it was less important	10

of the architects to consider all the variables in order to achieve privacy as required by the religious requirements. For example while the majority of respondents desired to have their own personal room, it is impossible especially in the apartments with 70m square or less because generally these types of apartments comprise two bedroom including a sitting room and a kitchen. However, the result of the study could provide an insight for design of apartments. Although the method is applied for Tehran apartments but it is flexible enough to be applied for different societies with different contexts. The differences will be shown through the level of desired privacy in different societies according to the design.

Based on questionnaire's results and above mentioned divisions and based on studied done on this issue and also logical reasoning based on drawn plans, 4 main zone presented for residential apartments and this can show the highest level of privacy in iranian housing apartments. The discussion can be considered as a beginning for investigation on zone of privacy in contemporary housing. The results were used to provide a guideline for apartment layouts design in order to achieve the highest level of privacy.

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