

## Study of privacy in the residential architecture in cold and dry areas of Iran

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### ABSTRACT

Privacy principle as a principle governing all aspects of life, has spread in the traditional Iranian architecture beautifully, and it has profound implications and results of the spatial organization of the various functions. Architecture and culture throughout history have always been in close contact and they have mutual influence on each other. Many valuable features of traditional houses are the examples to maintain dignity that nowadays, with Arrival of culture and elements of Western architecture and many other factors, rarely seen a reflection of these features in contemporary residential architecture. Place of women and the role of culture have helped to Appearance the privacy of traditional architecture of Iran that have lead to the formation of special kinds of architecture, especially in residential areas of Iran. This is while we are witness to fading the privacy of Iranian today's architecture, disappearance of private areas, Sometimes extreme extroversion and unnecessary introversion. Because of the nature of the subject, descriptive analytical method is selected and the authors, have developed theoretical framework of research by library studies. Studies show that the confidentiality principle originating from the culture of the people of cold and dry areas. by more analysis in the residential architecture of these areas, we have found out that other factors such as climate and sites are of secondary importance and in the present study this can be achieved that privacy the significant and influence principle in shaping the architecture of the building in cold and dry areas lead architects to achieve the patterns of residential architecture in this area.

**KEY WORDS:** Privacy, Culture, Residential architecture, Cold and dry areas

### 1. INTRODUCTION

Privacy as one of the basic principles of Islamic architecture has different dimensions and aspects. The existing privacy in Iranian houses, mosques, baths and gardens indicates the issue. The word "Harim" (privacy) is defined as surrounding, house perimeter and a place that its support and defense is obligatory. It is also defined as "prohibition" in Arabic [1].

Privacy makes border, but it is not only separation. It is correct that privacy creates an aura that prevents from others' violation, but the privacy preserves others' privacy while protecting man's integrity. Privacy bonds, parties to each other without association and considers them as a single unit without mixture. Sincerity in Asian ceremonies is essentially different from the common one in the modern world. Privacy has not justification in only social relationships, but its essentiality can be searched in adjusting house and urban spaces as well as garden layout. Since privacy is balance and the union of paradoxes that is maintaining the balance between outside and inside as well as awareness and unawareness of this world and other world. The Eastern religious life in the past such as praying, charities, pilgrimage and invocation of ancestors purifies unaware man's world, which is the repository of destructing powers, makes his way into the outside world through this religious rite and manifests itself in the form of internal world in the veil of allegory and mystery [2].

Iran's past architecture was integrated with privacy and introversion. The introversive houses in all regions of Iran confirms this claim. Iranian house is a channel toward the innermost layer of thought and fancy, a wisely interpretation of Iranian worldview. According to Aristotelian logic, all the differences of artworks have their origin in these factors. In other words, they have origin in subjective cause. The factor forming the cause is a set of doctrinal and cultural foundations. Therefore, it can be mentioned that the complete house structure in the environment indicates the close relation between nature and Iranian worldview and culture. Privacy is one of the

important principles in designing and constructing Iranian houses and over time, the employed methods have been changed according to the climate of region and security and time [3].

The small and unsuitable arena of modern houses have made considerable change in family and social relationships. Considering the form of drawing-rooms in traditional houses, it can be found that one of their common forms has been L-form. One of the best forms that guests can be received and mixture can be avoided. The quality of such a form is that female guests can be placed in one corner and male ones in another corner. In this mode, while assigning a space for all guests, their mixture is also avoided. In modern houses, drawing-rooms have no separation for females and males so that mixture is permeated social and family relationships easily and the past privacy is forgotten among families. The interesting point is that spaces are so interwoven and small that guest drawing space has no separation with family private space, exactly contrary to what was common in our culture and customs that inside and outside of houses were different. Modern houses seek to assimilate individuals' public and private life.

The principle of introversion that was observed in buildings in many cities of Iran owing to the impact of various factors including learning status and security was confirmed and encouraged because of adaptability with the principle of honoring family in Islam and its application continued in architectural spaces.

To honor in addition to observe the principle of introversion in designing a number of architectural elements and spaces, they observe a number of points and principles including in designing the entrance space of residential units (in introversive spaces), the movement direction from outside to inside was designed so that referents to the interior space could not enter suddenly and would not be able to see there from the entrance place.

Bachelard writes that man is put in the cradle of house before being cast in the world. In the house, familiarity with the world is occurred without a mediator. Over there, there is no need to search goal, the world is granted there in the house and around it simply. It can be mentioned that house is a place in which the occurrence of daily life indicates something that has persevered its continuance in our universe, therefore, a familiar haven supports us.

In traditional houses, the entrance door was opened toward a corridor or a vestibule. In some houses, yard separated interior and exterior space. Corridor or vestibule separated family private space from guest drawing space, but nowadays, if a neighbor knocks on the door and it is opened, the whole house is observed. Thus, in apartment life, strangeness has become greater owing to the interference of private limits and neighbors' social distance, exactly such as an elevator in which individuals have more cautious and stranger relationships owing to individuals' excessive closeness to each other. In fact, normally when such spaces and privacy vanish, making healthier relationships becomes more difficult. Although closeness has become greater, strangeness has increased. It is the same in the house. The interference of female and male space or the space of children and parents makes strangeness among family members and in some cases, it has some corruptions. Therefore, in residential architecture, we seek a model to solve the problems of modern architecture [3].

In this paper, it is attempted to answer the question that "does privacy exist in residential architecture of cold area?" In the case of its existence and in researchers' results indicating that culture is the main factor of forming house, "what is the origin of privacy, popular culture or climate or site?"

## 2. LITERATURE REVIEW

### 2.1. Residence

Residence can be considered as the indicator of the determination of position and authentication. Residence indicates the meaningful bond between man and a supposed environment that the bond is the result of attempt to find belonging to a place. Accordingly, when man obtains self-cognizance that selects residence and consequently stabilizes his existence in the world [4]. According to Heidegger, the way of being men on the earth is their residence. He in his paper "Building, Dwelling, Thinking" with the etymology of German word of building reopens old implications and conceptual area in order to express existence food and interprets residence as being with things so that discusses the residence of man's nature in existence and time, which in fact is man's existence itself. He, in his speech, insists that thought and poem are required for residence. He supposes residence as the most fundamental feature of existence in accordance with what is mortal ones. At the end of his paper, it is mentioned that at present all speak of the lack of residence, but no one thinks about the real disaster. Man's homelessness is the result of the fact that no one understands the real crisis of residence as a disaster. Heidegger's answer to the problem is that mortal ones lead residence toward the integrity of their nature and this depends on the fact that build based on residence and think for residence [5].

Residence means the place of peace and dwelling. It is where man live there. In Dehkhoda's lexicon, residence is defined as home, house, dwelling and a calm place.

In the second conference of Man's Settlement, (1996) that was held in Istanbul, suitable residence is defined as "a suitable shelter is not defined as a roof over someone, but it means modest comfort, suitable space, physical access, suitable security, ownership security, stability and durability of constructs, lightning,

ventilation, suitable heating system, initial infrastructures such as suitable water supply, hygiene and education, waste disposal, suitable bioenvironmental quality, suitable hygienic factors, suitable and accessible place in terms of work and initial facilities that all of these cases should be provided in accordance with people's ability [6].

Bachelard write that man is put in the cradle of house before being cast in the world.

Le Corbusier also mentions that house is a cover that makes an appropriate relation to the exterior environment and man's biological phenomena in adaptability with a number of conditions. In the house, one person or one family live [7].

Rapoport points out that house is an institution in the direction of a set of complex intentions and its performance is beyond a material concept [8].

Haeri considers Iranian house as the world of Iranian individual [9].

## **2.2. Effective Factors on forming Residence**

In today's life, various factors are involved in making a residence. A number of the factors are external ones influencing structures and spaces in different forms. The major part of the factors includes as follows:

### **2.2.1. Economy**

Economic conditions of each society can its residence structure significantly. The lowness of families' income, as a result, inaccessibility to good and high-quality material, inattention to the fit between spaces and resident individuals, unsafety of constructs, ignoring many of aesthetics dimensions and irregular and unsuitable development of using minimum spaces are all among the effects of this important parameter in constructing houses.

### **2.2.2. Knowledge**

As man's knowledge of his surrounding environment is greater, his needs also increase. Satisfying these needs requires greater thought and offering new solutions. Identification of architecture of different places, use of new material, advanced technologies and innovations have made modern man's views affected and create more needs in him. With meeting each need, a new need is created and these needs require change so that they gradually create movement and dynamism in the house-construction.

### **2.2.3. Level of Society's Thought**

It can be mentioned that thought level and knowledge are necessary for each other. Greater understanding requires greater knowledge and as awareness becomes greater thought level also increases. Generally, the two above-mentioned factors are correlated with society's culture [4].

### **2.2.4. Culture**

One of the important and considerable factors of house-construction is the culture of the intended region. People's way of life in a region, beliefs, views, ideas, customs, habits and perspectives have a considerable effect in creating their living environment. The existence of limits for privacy and the adjustment of general relations, hierarchies and accessibility are all the result of people's culture. The culture, which was common among people and formed their daily life. Customs and beliefs that are gradually created in them develop and sometimes new things are added to them and sometimes some parts of them eliminated. This important case has a considerable effect on creating different spaces and interior relations of a house (component) and its relation with the surrounding (neighbors) and different urban spaces.

Researchers believe that house is an institution with multi-dimensional performance affected by society, culture, religious rites, economy, environmental conditions rather than a skeleton structure and since constructing a house is a cultural affair, its form and organization is influenced by the culture that the house is its product [8]. Thus, houses in accordance with their cultures and space order indicate the social relationships of individuals dwelling in them. In examining house form in seventy three different cultures, it was observed that the rate of dividing house's interior space depends on the rate of sociopolitical complexity in that culture. According to culture-oriented researchers' view, culture is the main factor of forming house and the factors of climate, site and economy are the second-degree ones, because of climate is the first-degree factor in forming house, therefore, why in the climate such as Sanandaj, there is not one type of house? Thus, it can be concluded that local or cultural tradition is directly related to the physical forms of each culture. In other words, these two factors are necessary for each other [8].

Yard, influenced by the culture of different societies, is among the important components of house that has different types of performance in addition to organizing rooms and surrounding space except Iran and other Islamic lands that yard affects climatic, functional, cultural and doctrinal applications. In Ancient Greece (the land of various gods) house yard has had metaphysical sense and surrounding house was considered as surrounding the adytum of family gods that strange individuals had not the right to enter [10].

What can be understood from this view is markedly different from Islam's view that regards house as the place of security, peace and family limits not a place to sanctifying gods. In addition, the stately houses of ancient Rome had an important symbolic hall named "hall of ancestors" in which the sculpture of family ancestors was kept there in addition to their living place [11].

In the Eastern countries like Japan, architecture is influenced by cultural characteristics so that two their architecture is affected by two qualities of army mood and artistic tendency that are related to Shinto religion that is based on animism and nature-worshipping. The issue of combining house with nature in this culture is rooted in their belief and its extroversive architecture considered interior and exterior space the same so that its separating paper-walls created the lowest privacy in space. In native Japanese houses, there was a part for living room and daily works and another part for rest and sleep. This model was used as a type of traditional architecture in cities' architecture [12].

### **2.2.5. Climate**

Weather and climatic conditions are also among factors that overshadow house construction fatalistically. Direction of sunlight, direction of wind (suitable and unsuitable wind), necessity of heat exchange or its lack, precipitation, humidity and other climatic factors determine the type of construction material in addition to affecting space structure.

### **2.3. Islam and Privacy**

Iranian houses generally have regarded observing privacy and to do it have used the model of the interference of area in unified space and the model of the separation of their place. As a result, certain types of building forms and their interior arrangement are repeated widely. These models exist in a number of other Islamic countries that are confronted with privacy. In Iran, since the acceptance of Islam, it can be clearly found that the relation between woman and man has been the most important principle of forming and defining privacy inside and outside house [11].

In Islam, hearty peace and confidence begin from individuals' inner dimension and develop by proper relation with other Muslims. This starting point, which is placed in family, is important. Therefore, in accordance with the orders of holy Islam, sexual instinct should be controlled and managed in the direction of the durability of family and marriage and the reduction of social stresses and it should be placed in the area of legitimate marriage and the limit of social work and activity should not be interfered with sexual issues [13].

This important issue is possible through two methods. The first method is that man should not look at strange woman's body to take pleasure and the second method is that woman should wear her body (except her face and hands to wrist) to avoid attracting men. Islamic teachings describe Muslims' proper behavior and the houses' relational system should be a symbol of these religious behavioral patterns facilitating Muslims' religious duties. A culture that promotes respecting guests and observing their privacy has a considerable effect on Iranian architecture especially house architecture. House space including yard and rooms is man's privacy and permission should be obtained to enter it. This privacy is a special area of time and place that individuals can be in seclusion, response to their personal feelings and satisfy their mental needs properly free from certain frames of social behavior. Islam also respect the right and considers its observation obligatory for Muslims [14]. Privacy is observed as the man's fundamental interest in all cultures. This privacy is a place that has limits and it should not be violated without reason [15].

Permission is a necessary issue in Islam that is an ethical issue and is not relevant to the entrance of neighbors and strangers to the house and family privacy, but it includes children's entrance to their parents' room and even each other's room so that they are obliged to obtain permission before puberty, in three times and after puberty, in each time entering their parents' room. Thus, in Muslims' house, from a particular age, the residence place of children becomes separated from parents' one and houses should have various rooms. Furthermore, Islam's emphasis on specifying rest privacy at night has made Iranian houses to have walls or at least wooden or stone fence around their limits physically and noticeably. The privacy is a place that others are prohibited to enter or violate it visually [11].

Considering privacy was observed in the form of entrance door and its affixed equipment. Since all referents were obliged to allow, two metal doorbells that one of them has a metal ring and other is a metal hammer. Vestibule space is among the important elements of entrance system that sometimes it is used as a place to receive the referent who is not invited to drawing room. The access path to privacy and receiving area for houses with two yards is also vestibule. Thus, vestibule has architectural performance and also is in harmony with the intricacies of social life. However, the general plan of vestibules is octagon, they have square, rectangle and polygon forms. Vestibule usually includes main entrance, room access and corridor leading to house's yard. This corridor may be direct, L-form, or spiral, because its main goal is preventing from direct view from the exterior to the interior of house. If linear from is chosen as the entrance path to yard, it usually lead to a corner of the yard that family has no particular activity there [11].

**Table 1.** Model of Muslim-resident houses (Memarian et al., 2010)

Houses	Muslim-resident
Receiving model	Receiving separated from the private area indicated by decorations. Receiving area is separated owing to observing religious behavioral models.
Privacy model	Separated living and drawing and sometimes interior and exterior yards are formed. Houses have one, two or sometimes three yards with doorbells.
Façade model	Brickwork with abstract geometry; nature-adaptable colors
Particular cases	Parents' room is separated from children's one
Neighborhood	Violating neighbor's privacy, generally high roof edge without window facing the alley
Direction	Kiblah direction (northeast-southwest)
Type of texture	Concentrated texture with general and free space such as religious theatre and Husseinie (holy places named after Imam Hussein)
Space joint	Open-faced yard joint, corridor joint between rooms and ordered vestibule joint
House sign	Large propylaeum with mentioning particular verses of the holy Koran

#### 2.4. Architectural Features of Cold and Dry Areas

The general and major principles of observed in the architecture of cold areas are as follows:

1. The use of compressed plans
2. Minimizing the exterior surface against covered volume
3. The use of materials with good thermal-insulated capacity
4. Minimizing interior air change and natural ventilation as a result of preventing from burning inside and the outlet of interior heat to outside
5. Selecting flat roofs and maintaining snow on roofs as thermal insulation

The only difference between the architecture of these regions and that of warm and dry regions is the necessity and inclination of using sunlight heat in the buildings in winter. Certainly, this need is usually overshadowed by wind and its cold blowing on the building and generally it is attempted to keep exterior surface in minimum. However, in any case, the exterior surface is selected in dark color and larger windows than those of warm and dry regions are selected in order to use the energy of sunlight. On the other hand, the generalities of the climatic conditions of these regions includes cases such as bitter cold in winter, temperate weather in summer, heavy snow, low humidity, considerable difference of temperature between night and day [16].

##### 2.4.1. General Features of Urban and Rural Texture

Small and surrounded urban and rural spaces have compressed and urban and rural texture and buildings are attached to each other. The determination for the sun and terrain complications to determine the establishment and development of the general appearance of cities, villages, alleys and main passages are parallel to land level often with narrow width. In addition, owing to bitter cold in most of the year, in these regions, urban texture is compressed and building are attached to each other in order to make the contact level of warm residential spaces lower with the exterior cold environment. Urban species are more surrounded and smaller so that the direction of cold wind would less penetrate the inside of these spaces. Furthermore, the radiation of heat from the exterior surfaces of buildings' warm walls moderates the cold weather of urban spaces. The smallness of these spaces is an advantage from this perspective. The general form features of building in these regions include cases such as introversion, low relation of exterior crust surface to the volume of building, low height of rooms, flat roofs, small opens, small porches and yards and relatively thick walls [16].

The used materials in traditional buildings in cold and dry regions like other regions are available things. Therefore, most of walls are made of stone and tree wood and thatch are used to cover roofs. These materials are appropriate climatically and economically, because their relatively thickness have good performance thermally and buildings' roof is relatively resistant to rain. Since all the used material exist in the region, providing them is economic. In the area around foothills and regions with sufficient clay, adobe and brick walls are made [16].

In general, the architectural features of these regions can be mentioned as follows:

1. Materials have high resistance and thermal capacity
2. The use of native materials
3. Plans is compressed
4. Constructing underground building owing to the use of soil thermal capacity
5. Roof is flat and two-layer
6. The direction of buildings are southeast and southwest according to the radiation of sunlight
7. The level and number of windows are low
8. The use rate of natural ventilation is low
9. The compel texture is compressed
10. The exterior color of building is dark [17].

### 3. Conclusion

One of the most important dimensions of designing residential spaces in Iran is predicting interior veil that this issue dates back to before Islam and springs from the popular culture of this country so that Iranian introverted house confirms the claim. For this reason, culture is the main factor of forming residential architecture of Iranian houses and the architecture space in different climates is culture-accepting. In the present research, it was found that “privacy exists in the residential architecture of cold regions” and is effective and visible principle in forming the residential of cold and dry regions as well as architects’ guide in reaching models for the residential architecture of the regions. Made houses in these regions like those of the other region in Iran are made on the basis of Iranian tradition whose settlers felt a pleasant sense of life owing to maintaining their privacy. Analyzing the architecture of these regions and the sum of mentioned issues as well as considering internal and external factors in creating a space, we found that other factors such as access hierarchy, view, light, private and public arenas, and mediating spaces, adjacency of spaces, climate and site are of secondary importance.

### REFERENCES

1. Amid, H. Amid Dictionary (including Persian Words and common Arabic words in Persian), Second Volume, Amirkabir Publications. (1986).
2. Noorani, M. Privacy in Iranian garden, The Internet-based Journal of Landscape Architecture. (2008).
3. Bahrami, B. Designing Houses in Sartapuleh District of Sanandaj, Thesis of Faculty of Fine Arts. (2003).
4. Schultz, K.N. The concept of residence toward allegorical architecture, Tr. By Mahmud Amiryar Ahmadi, fourth edition, Agah Publications, Tehran. (2010).
5. Tahoori, N. Poetic silence, eternal making, (the analysis of similarity in Heidegger’s and Alexander’s views, Journal of Khial, no. 3. (2002).
6. Dalalpour Mohammadi, M. House planning, SAMT, Tehran. (2000).
7. Le Corbusier .Hoe to think about urbanism, Tr. By Mohammadtaqi Katebi, Amirkabir Publications, Tehran. (1975).
8. Rapoport, A. House Form and Culture, Prentice-Hall, Inc., Englewood Cliffs. N.J. (1969).
9. Haeri Mazandarani, M. House, culture and nature, Center for research of Architecture and Urbanism, Tehran. (2009).
10. Monestrioli, A. L’Architettura della realta’, Milano: Politecnico di Milano. (1979).
11. Memarian et al., The impact of religious culture on forming house, a comparative analysis of house in the districts of Muslims, Zoroastrians, and Jews in Kerman, Journal of Cultural Research, Issue 3, No. 2. (2010).
12. Tange K., Ishimoto Y. and Gropius W. Katsura: Tradition and Creation in Japanese Architecture, Yale University Press: New Haven. (1972).
13. Motahari, M. veil, Tehran sadra, and collection of martyr Motahari, (2008).
14. Ali abadi, M. The impact of Islamic culture on the houses and neighborhoods, Tehran, Center research architecture and urbanism department of housing and urban development, (2001).
15. Hansson, Mats G. The Private Sphere: An Emotional Territory And Its Agent New York: Springer. (2008).
16. Soheylivand, L. Construction Technology and optimum management of energy consumption at the time of establishment by emphasizing architecture in cold and dry climate of Iran, First Conference of Sustainable Architecture, Hamadan, Technical School of Sama, Hamadan. (2009).
17. Ghobadian, V. The climatic analysis of Iranian traditional buildings, Third Edition, Tehran University Press.
18. [www.civilica.com](http://www.civilica.com)
19. [www.hoviatshahr.ir](http://www.hoviatshahr.ir)