

Siranian Houses, Elements and the Link Between Them

Abdolbaghi Moradchelleh

Department of Architect, Gonbad Kavoods Branch Islamic Azad University, Gonbad Kavoods, Iran

Abstract: Requiring shelter as a materialistic and natural need is inspired by divine thought. It is the Spiritual soul dominant on Iranian Muslim architect that Iranian houses by keeping national soul and observing anthropomorphism, minimalism, structure and *Khod basandegy* (self-sufficiency) in all centuries are evolved. The most important characteristic of Iranian houses is their courtyard housing nature. The Iranian houses spaces are normally including public spaces, interior (*andarooni*) and exterior (*Birooni*), the link between three spaces and their components are investigated in the current paper and it is attempted to present a communication model.

Key words: Natural need • Inspired by divine thought • Interior (*andarooni*) • Communication model

INTRODUCTION

Human being need to shelter from different views is the starting factor or starting point of house building by human being. In the history human being is faced with building residential influenced by internal and external factors and is faced with the surrounding nature and building in different parts of the world.

Human being inspired by divine thought and by his action via this thought by nature starts building. Spiritual soul dominant on Muslim architect is appeared in its works in every part of the world and give them unity in different parts of the world from the north of Africa to east of Asia. The builders via this inspiration n and by the aid of local culture of architecture build a part of their identity. So, Iranian architecture, Marrakesh architecture and the architecture of other Muslim countries by their special local cultural features present one expression. However, in each of the countries by keeping national spirit different locations have different architecture.

Without exaggeration this land is one of Islam and non-Islam locations with various and innovative architecture. In all parts of Islamic Iran mono-building at mega scale links with its surrounding environment. At small scale, the building links with a set of other buildings forming Abadi and with a lot of buildings it establishes village and gradually the scale gets higher. In all these scales, the social relations between human being from the relation between a human being with another to the relationship of human being with nature in

all social fields and the spiritual relationship dominant on him- relationship with god is observed well and the difference of the type of buildings is arising from these relations [4]. Considering the architectural relation with beliefs, nature and its effect the relationship between house elements and the relationship between the components of each of external and internal parts of architecture including residential or social architecture are meaningful along with cultural and religious issues considering the climates and environmental and natural conditions. In the current paper at first by explaining the constituent elements of a low-rising residential building and examining the link between the elements, it is attempted to present a proposed model of communication model.

Iranian Residential Architecture: Iranian architecture is based on several fundamental characteristics. These are:

Mardomvary (Anthropomorphism): It implies compatibility between construction with human body and considering human being needs in construction building.

Minimalism: In Iranian architecture, it is attempted to avoid unnecessary works in construction building and avoid any waste.

Niaresh (Structural Stability): *Niaresh* was used in the past architecture in Iran. *Niaresh* is static knowledge, building techniques and determining materials.

Khod Basandegy (Self Sufficiency): Iranian architects attempt to provide the required materials from the nearest place. This reduces any sort of dependency from outside the area and to be self-sufficient.

Daroon-Graei (Courtyard Housing): Normally in organizing different parts of the building and especially traditional houses, people beliefs are very important. One of the Iranian people beliefs is respecting the private live and self esteem of Iranian people and this case has made Iranian architecture more inward looking.

In Islamic Iran, our architectures have some memorials of their innovations in all over Iran and their study and research grant us a world of art and thought including all the mosques, schools and Carvansary and great number of buildings in villages and cities are belonging to residential buildings.

Iranian buildings are including courtyard houses and houses without courtyard. houses without courtyard are buildings with direct visual and physical relation with the exterior space such as urban elements as passages, path and other external factors and its interior space has the same relationship with the external space. These kinds of buildings are built both in the form of public architecture and tombs, mosques and holy shrines and etc and residential architecture in different parts of Iran. So, in courtyard housing architecture, courtyard (*Hyat*) in addition to communicative functions and linking different spaces, brings the open space of the outside of the house to inside and most of the inner spaces opens to it and in this way the house has little link with the outside [1, 2].

House: In Iranian residential architecture in accordance with the demand and compatibility with the environment, different elements are implied. The house architecture is the oldest architectural item, it dates back to Stone Age and other buildings are house branches. Residential houses are including different spaces and most important of them are entry, courtyard (*Hayat*), room, *Tareqe*, *Shanasheel*, *Pishborn*.

Traditional houses in most of Iranian regions are consisting of a central courtyard in four sides of which there are living spaces and the house is consisting of exterior (*Biruni*) and interior (*Andaruni*) part. As in the past the houses were not open directly to the courtyard or interior space, it was leading into a space called "Hashti" and then it was dividing from *Hashti* to exterior and interior part. In the exterior part it opens directly to *Hashti* but to reach the interior section, at first a narrow

and spiral *Dalan* should be taken. This design prevents to see the inhabitants of the house from *Hashti*. This type of architecture is dedicated to "courtyard housing" feature in Iranian architecture. Interior (*Andaruni*) of the house belongs to *Maharem* (family members) and *Biruni* (exterior space) is for the residential and reception of guests.

In Iran traditional houses, the interior section dedicated the great section of the building in terms of area.

In a traditional house in Iran, the exterior part was very important in terms of architecture and decorations. These houses are often consisting of a big room facing *Gheble* and due to having 5 or 7 windows they were called "*Panjdari*" or "*Shahneshin*". This room and its windows (mostly of sashed windows) were decorated with many things as latticework, woodcarving, mirror work, plaster and painting. There were paintings; plaster and mirror work on the ceilings of these rooms.

Entrance: Entrance of the house is displayed by overdoor invitation. Overdoor of the house was built of simple or compact shapes and in both types it is attempted to display invitation sign by creating horizontal and vertical elements such as putting arch above the overdoor.

In great number of houses, entrance location to the courtyard was after the door or direct visual connection with it. The house entrance was located in the corner of one of the fronts or at the middle of it and it can be more than one entrance. The path taken from outside the house to the courtyard has different forms considering the existing elements in the way. Its simplest form is a direct line reaching the courtyard from *Dalan* or *Tarme* (Living room).

Other taken paths to reach the courtyard are as two crossing paths or spiral. In the first type it is done through *Dalan* or *Tarme*. The spiral type with different forms (simple or complex) in some of the houses the movement is done by both *Dalan* and *Tarme*.

Courtyard: The difference between courtyard housing and the houses without courtyard is the existence of courtyard. Courtyard in *Dehkhoda* Dictionary is implied to the space enclosed with wall in the house. Other words such as *Sahat*, *Sahn*, *Miansara*, *Sahnsaray* have the same meaning. As the Iranian architecture is mostly of courtyard housing, its different functions and characteristics are explained as the followings.

Functions of Courtyard: Courtyard in residential buildings is consisting of different connective functions to connect residential units and brings the open space inside the residential building and most of inner space is opened to it. We can say that the courtyard is used as the followings: ownership border, unifying and survey connection of some elements of the house linking some spaces, to build a green and enjoyable space, natural cooling system to pass wind, an important element to organize different spaces and it is used as a safe place for the comfort of the family. In houses without courtyard, these functions and connections are passed to other elements. Considering the characteristics of direct visual and physical connection with the outside space of the house, not having courtyard and height expansion and space organization in comparison with other spaces. For example *Dalan* in houses without courtyard typology. The characteristics of a courtyard house is summarized as two cases:

- The lack of direct visual connection of the inside spaces with its outside urban spaces.
- Its different spaces are organized by an element such as courtyard or enclosed spaces as the openings and holes are opened to these elements.

In the primary forming of courtyard housing in addition to disconnecting the exterior spaces by recognizing the geographical local characteristics and creating a safe environment for the house inhabitants, keeping the holy space of the family from the other view, after the advent of Islam went through the thoughts of Iranian fighters and the design of this space is done in different forms in one or more courtyards. In this case important houses are built as multi courtyard or exterior and interior courtyards.

Courtyard Components: Different elements of the house are different in terms of the required function and the kind of the house.

In ordinary houses with not rather big sizes, flowerbed, water well, Howz and small Ab-anbar are the main components of the courtyard.

Iwan: Using Iwan as one of the main elements in efficiency and decoration of the building is one of the innovations of Iranians. *Iwan* in *Ashkanid* civilization was built and it was inspired by *Siah Chador* and tent (*Kheime*).

Iwan is a semi-open space that is mostly closed from 3 sides and is facing an open space from one side. Iranian *Iwans* are mostly tall and they are built in conformity with the construction and this case makes them more coordinate and more beautiful. *Iwan* that is mostly consisting of a wagon vault is closed from 3 sides and it is opened to *Miansara*. *Iwans* are built as entrance and exit spaces and prevent sun rays while they are open to the courtyard. Focal *Iwan* is used for decoration.

Around all *Iwans*, there are some wall arcades to help to beautify them and avoid mono-construction. These vault arcades are in the form of square or rectangle and they are placed as framework "*Esper*" [3, 4].

Other House Elements: Iranian house in addition to the above issues are consisting of various elements. Some of these elements are as the followings:

Hojre: There were some spaces called *Hojre* or room being built around the central courtyard or *Miansara* with the form of square, rectangle or polygonal. *Hojre* was mostly with less light, low ceiling and they were built of wagon vault type.

Hojre was used in schools to accommodate clergymen and in *Carvansary* it was used for passengers rest and sleep and they were sometimes used for isolation of *Darvishes*.

Kafsh-Kan: Counter (*Pish-khan*): The enclosed place to take off shoes- The entrance to residential spaces.

Drainage: Drainage around the building used for moisture insulation stripe.

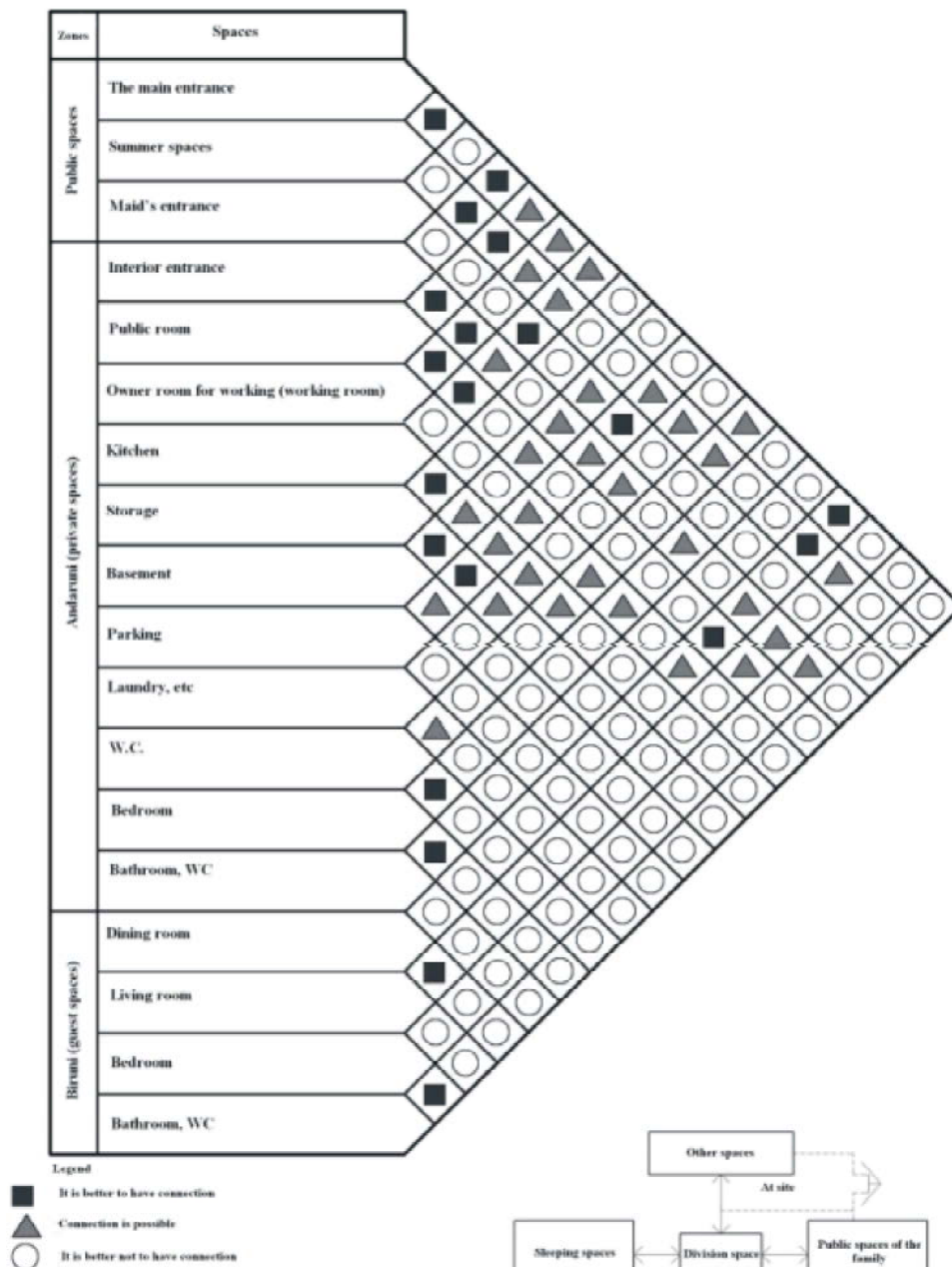
Biotat: It implies a minor building located in front of the main building and it is consisting of W.C, restroom- water well, kitchen, storage and small room.

Dalan: Long and dim hallway

Shahneshin (Dining Room): Dining room-*Talar*- Guest room

W.C: Rest room- W.C.Latrine.

Varkorsi (Bottom of Korsi): Low swelling of the building from the ground level.



The proposed model to connect residential building spaces

Hashti: *Hasht* means salient a lonely that is come out of the enclosed area of the house to have connection with the outside that is expected to be used for pause, spatial division. In other words, enclosed spaces are connected to *Kuche* (public passage) and courtyard.

Howzkhane: It implies a basement with pond (Howz) and in some cases water pond is passing in the middle of it. This space is having a separate wall from the main wall of

the basement with considering some distances and holes. Winds moves from *badgir* channel (wind-catcher) around the wall and front wall and it comes out of the required holes.

Sardab: *badgir* (wind catcher) basement. (In these basements under the badger channel, water well is dug and the wind reaches the will and water surface and reaches the surface of the basement via horizontal

channel and another well) and this method creates water cooler in basement spaces (*Sardab*). So it is called *Sardab* [4, 5, 6].

CONCLUSION

Considering the public spaces, exterior and interior parts of the house and different components the required classification are done for Iranian house spaces and the connection between different spaces are created.

Public Spaces: Public spaces are including the main entrance, summer space, a separate entrance for maids. The main entrance can be connected to the summer space, so it is better that there is no connection between the main entrance and summer space and maids entrance.

Andaruni or Interior Spaces: *Andaruni* (interior space) is the owner space and Members of the family (*Maharem*). If some of *Andaruni* elements have connection with public spaces, it is better. For example, public room, working room, basement, parking and toilet. But it is better that some of *Andaruni* elements such as Storage, laundry, bedroom and bathroom don't have any connection.

Biruni or Exterior Spaces: Exterior spaces were mostly used for the guests. In guest or exterior spaces it is better that two dining spaces and also between two bedroom and bathroom be a connection but there should be no connection between dining room and bedroom. If there is a connection between dining space from exterior space and public room from *Andaruni* and two summer space and the main entrance of the public space, it is good.

Different cases of connection necessity, the possibility of connection and not requiring connection between Iranian house spaces are presented as a connection model of residential buildings as the followings.

REFERENCES

1. Pirnia, Mohammad Karim, 2004. edited by: Memarian, Gholamhossein. The style of Iranian architecture, Tehran.
2. Zomorshdi, Hossein, 2001. Iranian architecture and construction of the building with traditional materials. Tehran: Azade Publication.
3. Moshtaq, Khalil, 2008. The History of Iranian architecture in ancient era and Islamic era with an abstract of architecture art of Islamic countries. Tehran: Azadandishan Publication.
4. Memarian, Gholamhossein, 1996. Introduction to house typology in Iran, House without courtyard. Tehran, University of Science and Technology.
5. Memarian, Gholamhossein, 1995. Introduction to House typology in Iran, Courtyard houses. Tehran, University of Science and Technology.
6. Morad Chele, Abdolbaqi, 2008. The principles and traditions of forming Iranian architecture. Doctratesis of architecture. National university and architecture building of Kiev in Ukraine.