

The Study on the Importance of the Loggia, Yard and Room in Iranian House (With an Emphasis on the Houses of Zanjan)

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Abstract: The study discusses mainly about the significant objects of Iranian Houses to reach a pattern for the houses of Zanjan. On the other hand, these houses are include as an space of Iranian traditional house having conceptual, functional and physical value. Therefore, the history of the spaces is presented to reach the pattern for the houses of Zanjan which include Iranian identity and Iranian architecture.

Key words: Yard, loggia, room, identity, the houses of Zanjan

INTRODUCTION

Anciently, house was more valuable than a simple shelter at the levels of building and events happening there. Now a days, however ignoring values and norms with the identity matters and emphasizing mainly on the economic issues causes the role of house to be abandoned in many countries. There can see no study on the issues of cultural matters in Zanjan which leads the architecture to lose its identity following the imitation. The main source of the study is the houses of the suburbs and surrounding villages.

MATERIALS AND METHODS

Theoreticians' definition of house

Amos rappapourt: House, rather than being a physical structure is a multi-functional institution affected by the community, culture, creed, economy and environmental circumstances. As it is a cultural issue by itself, its form and structure is affected by them.

Christopher Alexander: He believes the patterns can respond the design problems while any pattern can be used as solution just once. His patterns mostly are used for extended and nuclear family to make better communication with the family members (Burckhardt, 1990).

Pirnia: House is a place where the residents don't feel bothered and its inside gets more variable not to make the family bored (Pirnia, 2008).

Schultz: House is the daily destination of human being who exits to work and comes back with experiences. It has a massive importance which can be called as the core of human being.

Iranian house in the words of traditionalists is made of courtyard, porch and rooms that representing soul, ego and body. Nature is created by LORD and is a symbol of him. Courtyard is embracing the nature and because of this, it's called the "soul" and act as a inductor that will determine the spiritual ways and family private identity. Rooms is an imagination of human cube and their dependence to house equals the dependence of an individual to family. Hall is representing an indiscrete history among the rooms. In Iranian house stone bench comes as throne that abscissa is seen as different altitudinal levels. Stone benches can be seen in balconies or indents inside the room and the uppermost area that contains stone bench is alcove and finally porches actually act as a bridge between time and terrestrial realms.

Table 1 presents the definition of Iranian architectural components provided by various theoreticians including Alexander, Yorkhat and Diba. If the existed traditional architecture ideas in present ages coordinate with people's life it can solve some of the problems and dysfunctions of architecture. A couple of Iranian houses are studied blow and can show the similarities between Iranian houses.

In this houses clearly specified that whatever protected during ages is indeed major Persian architectural elements. This elements displayed in different figure regarding to region climate and

Table 1: Theoreticians' Definition of Iranian architectural components

Theoretician	Yard	Porch	Room
Alexander (2007)	The area that you consider as a surrounded yard must have a view to a larger outdoor area and at least 2 or 3 doors must exist between the yard and the building and also the paths that link them and you can consider a porch on one side of yard's wall There is 3 major reason that will make a yard work not properly: The area between in and out is obscure too much There is not enough doors toward the courtyard The area is surrounded too much (paying attention to climate condition is necessary)	Alexander believes that the house must have a balance between being private and public regarding to physical dimension Private territories are settled against public structure and areas	Alexander mentioned notes about room and private area in 75 patterns: groups and individuals private territory, spouses, territory, personal room separate, houses for smaller families A common area for general doings: cooking, gardening and, etc. An area for gathering and talking for family members
Yorkhart	Islamic house is entirely closed to outside world thus family brio is separated from common social life and just top of that is open to the sky that is reflected on fountain at the bottom		
Diba and Yaghini (1993)	Courtyard that as house open space is important like other areas that make a connection between house and nature. Casually carry out other areas functions And also it was a place for gathering of deferent ethnic groups in variety of events	Porch as the semi open area of the house is the most important and functional area that has multi-function. because of the small temperature changes in 9 month of a year and adequate climate almost all the routine doings like cooking, house works, eating, seating and even sleep is occurs in this area during the summer	



Fig. 1: Dovoodi house plan

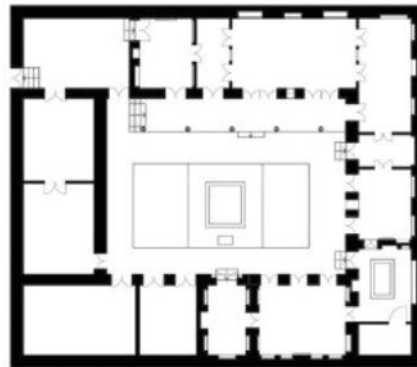


Fig. 3: Shahbazi house plan



Fig. 2: Montajebi house plan

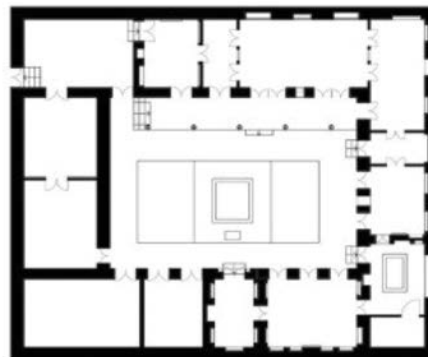


Fig. 4: Amirian house plan

geography and also time of build but they've never been faded or trivialized. Figure 1-4 presents a summary of investigation of four Iranian houses.

Amirian house: The 50 year built, components separation are more in order and land form is square with 400 m area, following old patterns.

Table 2: Space-behave pattern evolution process (qajar-pahlavi):

Space-behave pattern evolution			Qajars houses	Pahlavi villas
Macro level	House and environment connection	Conversing hierarchical, indirect and gradual connection between house and environment to fast, direct and abrupt connection Conversing mediated and unmediated access points from out into main area Conversing two rows next to an access point house placing pattern to one row next to an access point		
	House and family typology	Conversing large central courtyard to small southern and Northern courtyards		
	Conversing flat	Contiguous widespread form into centralized and pointwise Conversing large multi-family houses to small single-family Conversing wide in one place splay families into discrete and core shaped families scattered throughout the city		
	Space diversity	Conversing open, semi and covered spaces pattern into covered space priority pattern Conversing space pattern retrieved from behavior pattern (terrace , rooms, small areas between rooms, roof and etc.) into areas based on function		
Middle level	Relations between spaces	Barrier: conversing usage pattern from door between rooms into separation of rooms by walls Ring: conversing separate access patterns of rooms to porch and terrace into access patterns for each room Distance and degree: conversing adjoining room axial connection pattern into sidereal connection of spaces from seat area Conversing main spaces in major paths (services and on the sidelines communicational) placement pattern into sidereal random lodgment and main spaces and services		
		Integration of structure and outer walls against independent structure from walls Elimination of decoration usage pattern and attention to details		
Micro level	Connection			
	Details	Conversing carpeted floor pattern and limited furniture into parquet floor pattern and furniture overcome space		

Shahbazi house : It's been built 70 years ago by 'Haj Asad Memar Bana'. This house is made of an inner and an outer courtyard and rooms are placed tetragonal around the courtyard.

Montajebi house : Remaining from the safavids and placed next to bazar. House entrance is made of vestibule and corridor and reaches to courtyard. Main part of the house is built at north side and south side and room services is at west. There are two families living in this house (Plasma, 2012).

Dovoodi house: According to cultural heritage and tourism organization of Islamic republic of iran's estimate it's been built in safavids and it's one of the first houses built on ruins of old city and is placed in the bazar territory.

Studies of different examples shows architectural changes during ages. Developing a conceptual and elaborate pattern smooth the path reaching the goal (Designing high quality contemporary house). With regard to Table 2, the description of each item in the first and second columns are provided in the corresponding rows.

Converting traditional architectural language to modern architecture: Transferring traditional architectural elements to a modern form is what should be considered in the design of the residential complex. Entrance, facade, landscaping and primary centralization of decoration are all items that need to be addressed (Memarian, 2005).

Entrance and vestibule had a special place in the past: Portals in the past were usually constructed in a way that that they prevented rain and snow drop in winter and prevented direct sunlight in summer. At the entrance, some religious phrases or Qur'anic verses were written so that people pass through Qur'anic verses or religious expressions when entering and leaving. Therefore, considering the retreat of the entrance of the building to the alley is a suitable space to design a magnificent portal. Retreat of the entrance to the alley from the religious dimension represents the belief of the people in not infringing the rights of others. Locating two platforms on either side of the entrance, in terms of the national norms and values, indicated valuing communication with neighbors and considering the rights of citizens to create

rest areas on the way and finally, in terms of religious beliefs, it was meant to create the right atmosphere to greet and escort guests and newcomers. This tradition is also religiously good, as Imam Muhammad Ghazali said, “but the rule of leaving is to come out by an order and the host has to come out with the guest up to the portal as the Prophet would have said” (Soltanzadeh, 1993). Vestibule that was immediately located after the doorway had a role of a small yard so that when someone wanted to communicate with people in the house, tell them news or take something, s/he had to enter the vestibule. The important thing here is that while this person was a guest at this house, s/he did not enter the interior of the house and had never seen up the privacy of its inhabitants closely.

Measures have been taken for designing this space, as the pre entrance space. For example, in religious terms (the principle of confidentiality), there is no direct view into the private space of the house. In terms of national values and norms (hospitality and respecting individuals arriving at home), existence of platforms around vestibule was to create the right atmosphere for lighting candles, relaxing and waiting for “posterity”. This space is also created for mental preparation of posterity to enter the main space. In fact, by reducing the brightness of the space as compared to the alley and increasing light in the path to the yard, the architect at this stage prepared the person to see the new space. In addition to making the person familiar with the decoration of the house, the Karbandi structure (iconic roof structure) of this space make the height of the environment close to the height of the human and thus, the incoming person did not feel inferior (in terms of public relations and religious dimension) and the person will have a chance to make decision at this point. A person who entered vestibule had to do something with the people of vestibule houses, otherwise s/he was considered a voyeur, strangers or thief. The guests had to wait and talk with households in the vestibule and at the same time no one could say they have waited in the street and he has not been treated well. If the conversation between the host and guest took long, they could sit on platforms that were inside the wall and refresh and they could even be hosted in the same location. If strangers and neighbors passed across the door, they couldn't understand who are standing in front of the door and what they are talking about. Accordingly, it is recommend to take lobby seriously into account when designing residential units and provide the right atmosphere to serve such guests in such circumstances by supplying modern furniture. Lobbies of residential buildings can be properly designed for a meeting space to provide an environment for neighbors to interact and communicate with each other. Public meeting of neighbors with any theme can be held in this part of the building.

Yard is the next element that is taken into consideration:

Yard is the past was the center and heart of the building. The central courtyard with a porch on each side was a feature that has long had a presence in the Persian architecture; however, sometimes the courtyard was not geometrically the center of the house but it was embedded to make connections between different parts of the house and other parts were the center of the house. Yard was a place for holding events such as religious festivals, weddings and family gatherings and it was usually rectangular. Aspects of a yard were determined by the number and performance of spaces around it. Each yard had usually a dock and several flowerbeds that were in different forms depending on local conditions such as weather and cultural factors. The enclosed spaces of the courtyard were organized in such a way that it fitted with the seasonal changes and various functions of adjoining rooms. In the yard of the old houses, dock and flower beds were the most prestigious elements (Schulz, 2002).

Existence of dock and flowerbed in the courtyard can be investigated from a religious dimension. Garden, in its particular sense, goes back to ancient times. Since, the term “paridaida” that means a walled-garden, until it was integrated with the Islamic attitude at the beginning of its creation and to this day, garden has always inspired the original sense of place in Iranian architecture. This concept is esoterically embodied in the form of a yard (Ardalan *et al.* 2013).

In this study, the proper design of green space was also important. In this project, in addition to maintaining the form of the central courtyard, it has been attempted to design green units for each block and thus provide a semi-private space for residents to keep in touch with each other and also take advantage of the main courtyard. The design of the spaces in between the residential blocks helps solve the daylighting problem of all units. In this way, adding a space between blocks will cause all units of all floors be bright and daylighted. Also, in order to raise the level of safety of residents, especially children, all passages of the complex are dedicated to pedestrians and just some paths have been considered for emergency vehicles in and around the complex. This has caused less disorganization in the context of existing streets.

RESULTS AND DISCUSSION

In order to achieve a suitable model for homes in Zanzan Province, few examples of traditional houses of this city are reviewed here: The first plan that was examined here:



Fig. 5: Section of the house of Asadi family

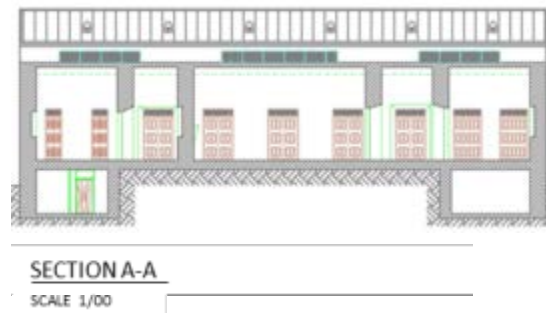


Fig. 7: Section the house of Asadi family

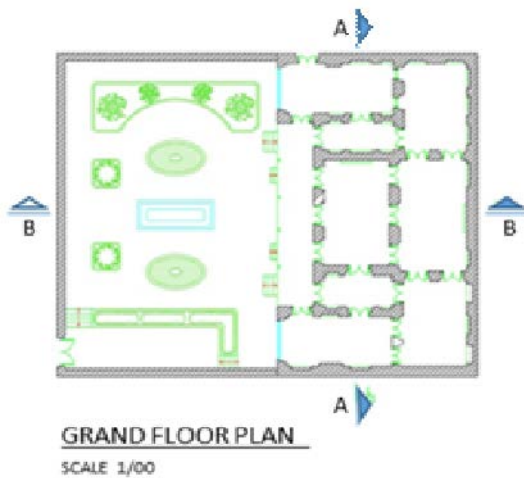


Fig. 6: Grand floorplan the house of Asadi family

The house of Asadi family: As the picture indicates, the form of the house is rectangular square. The rooms each have direct access to the yard. Multiplicity is seen in the rooms and piers are thick due to the load-bearing structure (Fig. 5 and 6).

The cutting also shows the basement of the house: A facade proper for this climate is brick facade and the use of columns was customary in these houses. The residential area has stretched from west to east so that the most use of the south light is possible (Fig. 7 and 8).

The house of Dabbagh family: In this house, it is seen that rooms have access to each other and a proper daylight is considered for all of them. The house is designed on two floors around a central courtyard (Fig. 9-11). In this house, the brick façade is also used. Bump and height of the windows is in a way that the longest daylight time is for the area used in winter.

The house of Haj Ali Family: In this case, like the previous examples, the use of columns and brick facade



Fig. 8: Elevation the house of Asadi family

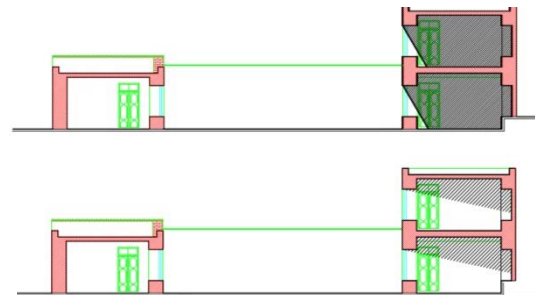


Fig. 9: Ghosting in summer and winter the hose of Dabbagh family



Fig. 10: Floor plan the hose of Dabbagh family

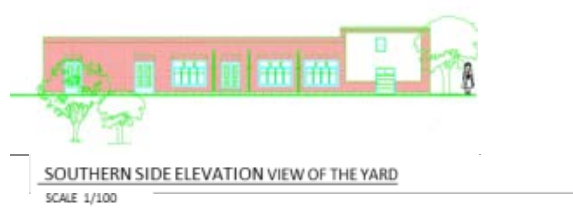


Fig. 11: Side elevation the hose of Dabbagh family



Fig. 12: Floor plan the hose of Dabbagh family



Fig. 13: Section of house of Hajali family

and multiple windows can be significantly seen. The special feature of this house is access of rooms to each other and the house is again stretched from east to west. A plurality of windows cause the house to be daylighted in more hours of the day (Fig. 13-15).

The house of Vaziri family: The house of Vaziri family is of greater area and has more rooms as compared to previous examples. However, these rooms have still access to each other. The cut shows that the height of the upper floor is more than the ground floor. The pier is still thick (Fig. 16-19).

Like other examples, the house has a brick facade and there are columns in the porch. Overall, the number of rooms and access of all rooms to each other, somehow, makes the use of the space very flexible. In this way, the

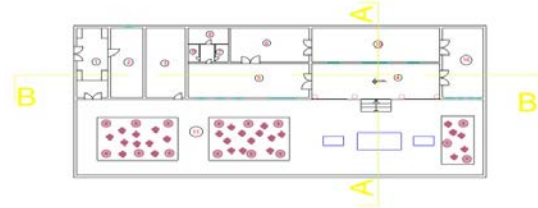


Fig. 14: Floor plan of house of Hajali family



Fig. 15: Section of house of Hajali family

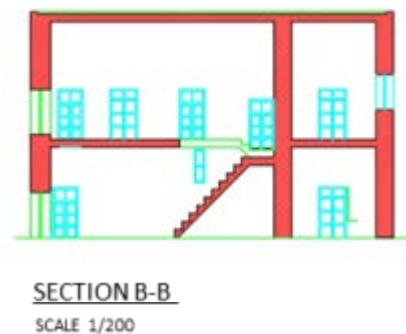


Fig. 16: Section of the house of Vaziri family



Fig. 17: Grand floor plan of the house of Vaziri family

building in the past could be used as a bedroom or dining room or other functions according to time and season. Existence of doors also made it possible to make the space larger by opening the doors when



Fig. 18: Elevation of the house of Vaziri family



Fig. 19: Section of the house of Vaziri family

needed. Due to climate and ecology, brick facade is the most appropriate facade for this region.

After reviewing a few examples of houses in Zanjan, the following suggestions are proposed to extract patterns for residential buildings in the city: designed units should be divided into three general forms:

- Town house form (more than one unit per plate)
- Series home form (one unit per plate)
- Urban villa form (more than one villa per plate)

According to today's economic problems and due to the high housing price per square meter, if the area of units is determined in accordance with economic potential of applicants, definitely we will see an increase in demand and boom in this sector.

Constructors should determine the total area of housing units according to households' purchasing power in the design of residential buildings which has received less attention in recent years. According to the Bureau of Planning and Housing Economy, if this is achieved, households will be provided an opportunity to purchase affordable houses, on the one hand and the possibility of selling new units supplied by the manufacturers will be facilitate, on the other hand and also new residential units won't remain empty and constructors' funding won't be locked.

If we carefully look around, we find that large families are replaced by small families over time. It seems that in recent years, "increase in the cost of fertility", "increase

in women's employment preferences" and "lifestyle change" have caused household utility to be increase in smaller populations.

This issue can be seen in "reduction of house areas", "reduction of fertility rates" and "reduction of school shifts" and other signs. On a closer look, statistics also confirm this trend.

This problem has led to the preference of the construction of units of 80-90 square meters and smaller. However, it should be noted in particular that if the people living in these houses do not get a sense of tranquility of space, their pressures and stresses of unsuitable home will be transmitted to society.

CONCLUSION

Architecture is a capability that historically has been discovered along with building and this capability is creative regulation of space. According to this definition, although events outside the buildings and colors and glazes of their appearance can be effective but inside of the box of the building is far more important, since the sense of space can be experienced with the presence of human. The theory of "architecture as the interior space" was proposed by Bruno Zee in the late 1940s. For him, "architectural space" refers to a place where movement can take place and a place where movement is impossible is not entailed in an architectural scale. In his definition, the trilogy of the presence of human, space and movement is concluded. Accordingly, the importance of design and interior architecture is no secret.

SUGGESTIONS

Open plan is the suggestion of authors for designing. Although open plan is a new concept but its roots can be traced back to the past. Development of spatial organization from the Renaissance to the Baroque indicates the birth of open plan. In general, space is understood as the contiguous flow defined within sub-regions. Open plan is in fact making the impression of a new space concrete. Open plan came into action for making life richer and more meaningful in the open and complex world and its purpose is clear. Open plan puts the static balance of the central and axial symmetry aside. Open plan space is not related to a dominant center but it depends on the interaction of equivalent areas. Building should be considered as a living organism and should have a complex unity yet comparable in it. Greater consistency is manifested with greater interweaving and continuity of spaces and not their sequence and hierarchy. Open plan requires the development of mutual

relations between inside and outside and even induction of any obvious difference between the two. Open plan is a general concept and it cannot be downgraded to its possible consequences such as “flexibility”. Flexibility is a subsidiary property of open plan.

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