

Evaluation of Traditional Iranian Houses and Match it with Modern Housing Darya Nosratpour

Sama technical and vocational training college, Islamic Azad University, Tehran Branch, Tehran, Iran

ABSTRACT

Iranian traditional houses have a kind of internal spaces structure on the basis of religious and traditional ideas of the Iranian families. Spatial flexibility, legibility, introversion, spatial hierarchy and respecting family privacy have special position in architecture of Iranian houses which has been replaced by extravert architecture. Traditional architecture which has all necessary spaces for any kind of communication inside the house has been replaced by the inn architecture of which residents don't expect stability and tranquility. For these residents, only equipments and services of the inn are important and they are not attached to its entirety. Living in contemporary houses has caused problems such as decrease of attachment feeling, tranquility and emergence of emotional and family problems. This article tries to compare architectural plans of Iranian traditional houses with the contemporary houses by studying them and emphasizing on their space quality and richness to take effective step for inclusion of these forgotten concepts in the single- dimension spaces of the contemporary houses while introducing spatial concepts of these houses.

KEYWORDS: traditional houses, traditional architecture, contemporary houses, Iranian architecture.

INTRODUCTION

Traditional Iranian architecture has manifested native-traditional models of the past history of Iran which have originated from individual and collective cultures of the people, who have been formed, have grown, have been manifested and have reached perfection.

Study of Iranian contemporary architecture indicates that it has been changed with regard to its rich and meaningful history during the history. These changes are due to apparent imitation of the architecture of other countries and ignoring this fact that any use of non-Iranian models shall be made by comparing these models with culture and living style and social structures.

Roots of the principles governing the traditional architecture can be found in Iranian thoughts and culture. Any building which is constructed aims at fulfillment of some living needs. In this article, house is studied as the most frequent man-made thing during history. House is not only a shelter and the human being doesn't only live under a ceiling and on some sq meters. Residence indicates meaningful link with the place which can include each one of different levels of private and general life environment. This link is an effort to find identity and to have attachment feeling toward a place while our modern houses couldn't have fulfilled the most primary needs of residence i.e. tranquility and physical relaxation and generally inspired quality expectations. Iranian house was a place to which the residents attached. These houses reflected principles which were congruent with internal modes of the human being and its structure was suitable for temporal and hereafter life and residence had real meaning in these houses. It is evident that goal of writing this article is not to encourage to imitate the past architecture but is to recognize these valuable historical treasures, their spatial concepts and effort to use them in contemporary houses because it was not possible to use traditional models in our modern architecture as they were used in the past. Today, some problems such as population growth, shortage of land etc entangle our societies.

Iranian house: house is a spatial unit which mixes some specifications of the private site with itself according to the studied performed so far. House is a private space and a domain while it is a place for protection against natural elements and interference of others in private area. House is a place in social world that is it gives opportunity to its residents to be present in a gathering which is formal and legal. In addition that house is a shelter for the people; it is a place for settlement of social unit which has been family in different periods. As result, it is a place for life of some persons who have close relations with each other. House prepares a domain for small group living which has provided opportunity for reproduction during the history and during biological life of human beings.

House is also a stable and reliable place for meeting mental needs of the persons. Although house is not only a private area, main illustrator of private area of the human being. Domain of house and family is an institutionalized area of private life of the person (Madani Pour).

Spatial structure of the traditional houses: we can mostly see the following sections in residential houses:

- 1- **Platform :** a place in two sides of the entrance door for taking rest while waiting, for entrance or talking with the neighbor

- 2- **Entrance door:** in most residential houses, entrance doors are paired and wooden and any pair has door knocker which has been installed on pairs of ring. The door knocker with low voice is used by the women and hammer knocker is used by men. This factor causes to separate gender limits and areas which start during entrance to the building.
- 3- **Vestibule:** immediately after entrance to the building, we reach lobby space which is in the form of octagon or tetragon. Lobby has short ceiling so that feeling of privacy is caused when we pass entrance space and reach this space. Space of lobby is temporary waiting space and has sitting platforms which have been designed separately for use of men and women as two parts. In this place, gender privacy separation is emphasized.

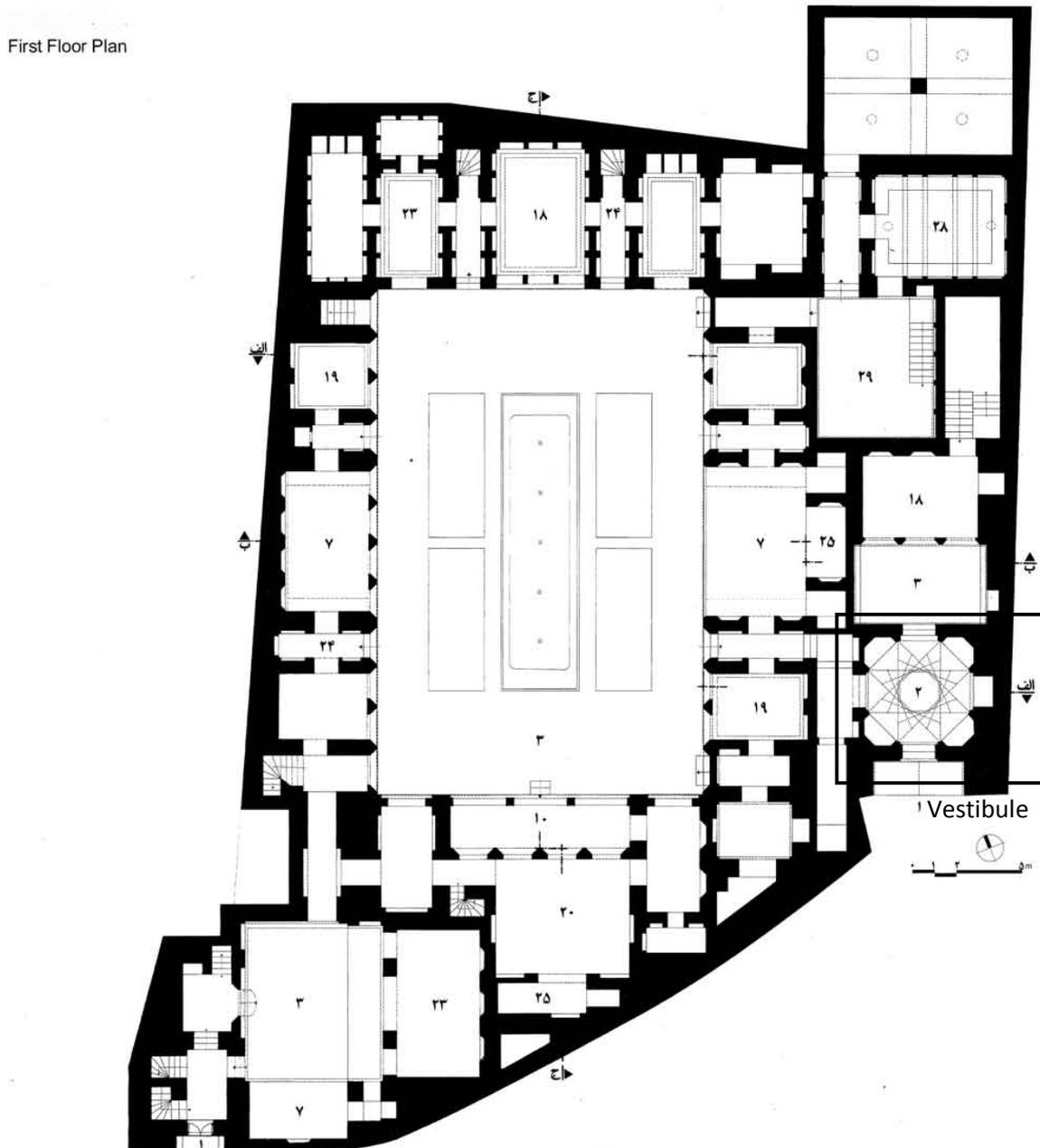


Figure 1: plan of the first story of Akhavan Sigari Yazd house, Yazd Houses Treasure Book, 2004

- 4- **Corridor:** is a spiral space which directs the entrant from the lobby to the yard. Spire of the corridor is for respecting the family privacy so that no person can enter this privacy and space of the corridor is regarded as family privacy and role of gender separation is not emphasized.

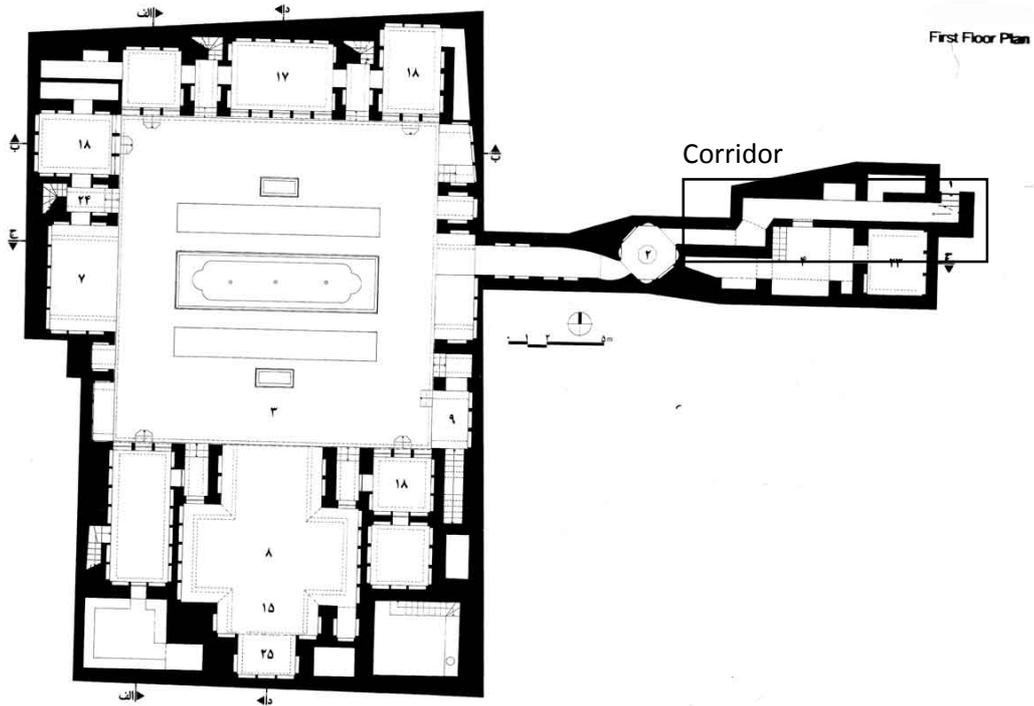


Figure 2: plan of the first story of Semsar Yazd House, Yazd Houses Treasure Book, 2004

- 5- **Yard:** yard in the old houses is located in center of the building and is regarded as heart of the building. Yard with the patios around it was used as a place for holding different religious and cultural ceremonies of the house residents.
- 6- **Eivan:** Eivan was like half-roofed space which surrounded the yard and was regarded as intermediate space between yard and building. Patio has had effect on spatial hierarchy of the building far from the climatic role.

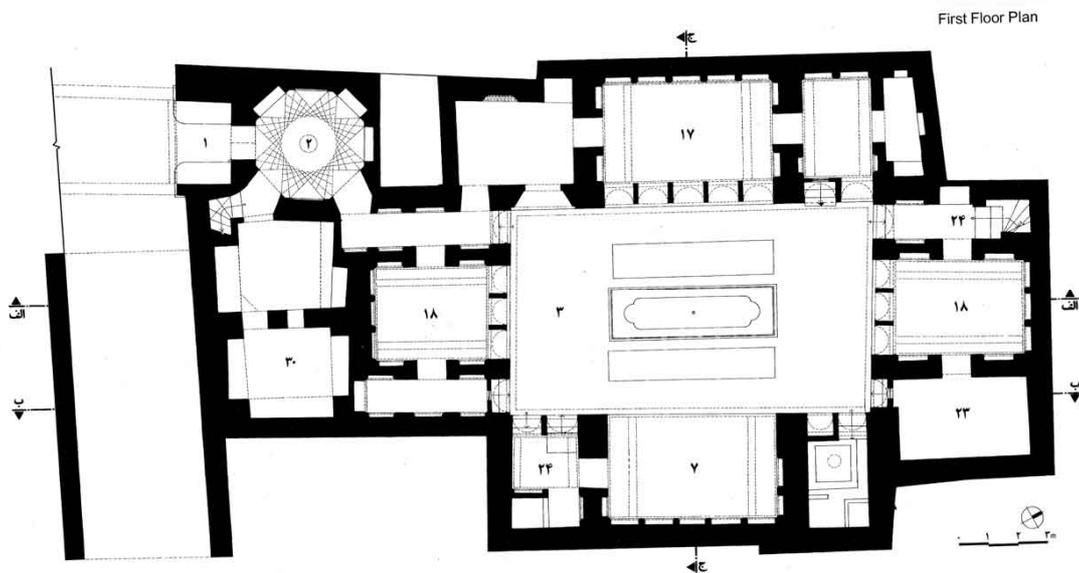


Figure 3: plan of the first story of Arab Yazd House, Yazd Houses Treasure Book, 2004

- 7- **Kitchen:** it is square or rectangular which had been designed in basement of the building with fuel store or was stuck or separated in corner of the building. Kitchen was not built in direction of the main axes of the building or beside important and main spaces. Kitchen was a place for cooking, storing wood and baking.
- 8- **WC and bathroom:** they were located in lower surface of the house for two reasons : easy use of water and its drainage and its heat
- 9- **Bathroom:** bathroom was divided into two parts: one for changing dress and another one for washing (hothouse)) which has been designed on basement.
- 10- **Reception Hall:** this element is a space with abundant decorations and designs which is very important beside simple rooms of the house. This space is linked to yard of the house with five-door and seven-door sashes and is used for hosting the respectful guests of the owner. With regard to broadness of this space, different parts had been separated for use of men and women.

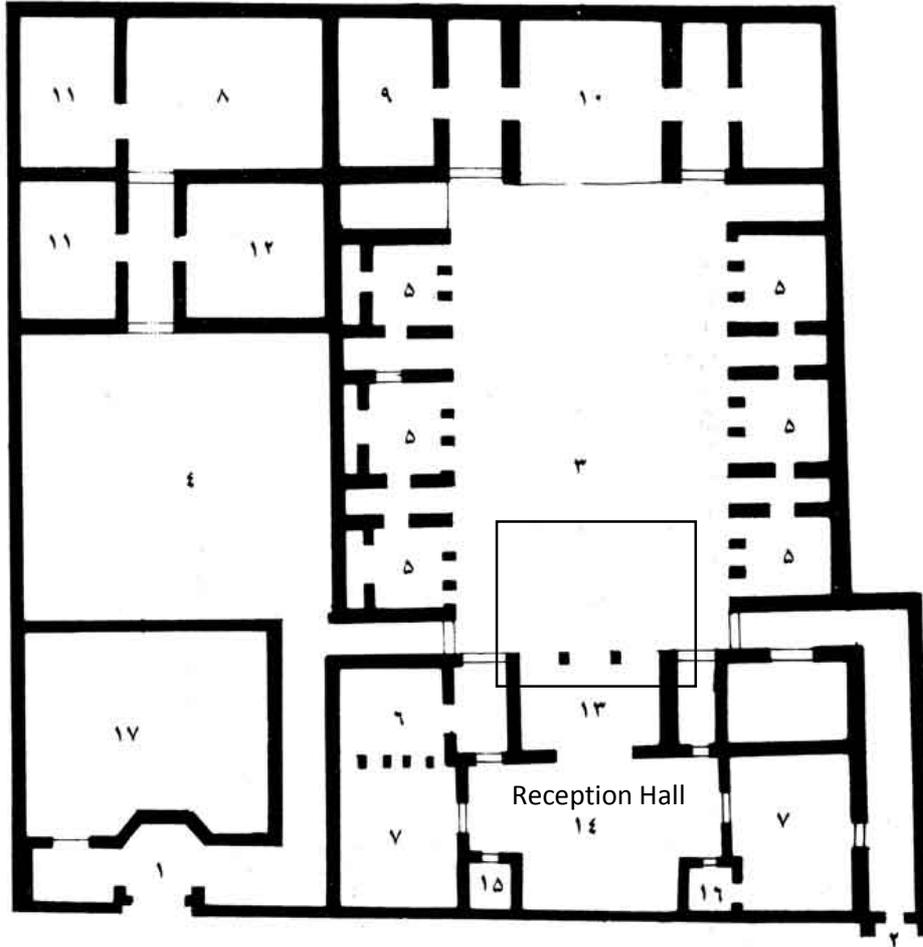


Figure 4: Pimia, 1995

- 11- **Room:** these spaces included three-door, five -door and hall places. With regard to broadness of these rooms and use of space, name of these rooms changed, light shaft of these rooms was different so that some rooms which were located in summer quarter part. Sun didn't shine there and had low light and light passed over it. Some parts such as tesar or tacher or summer room had such light shaft because it was limited among other main rooms.

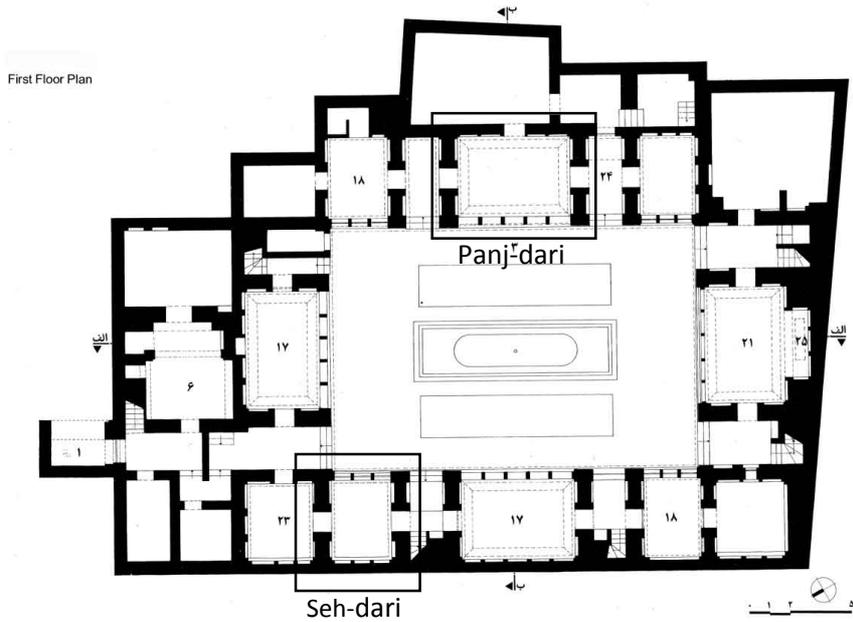


Figure 5- plan of the first story of Arab Yazd House, Yazd Houses Treasure Book, 2004

12-summer room and winter room

In most buildings which had been constructed in such way, summer room was very important and was designed in more than one story. Link of this part with space of hall and communication spaces of hall and vault in which height difference was about 7-8 m below ground surface cooled it in summer season. Use of decorations and all kinds of plasterwork and tile in this place gave more beauty to this part of the building than other parts of the building.

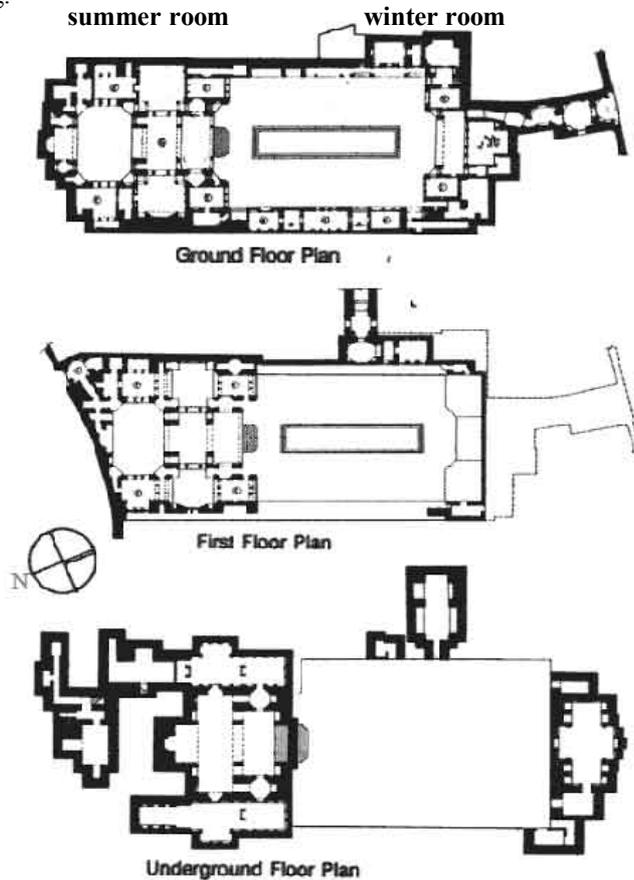


Figure 6: plan of Broojerdiha Kashan house, internet

Concept of quality in traditional Iranian houses:

Architecture of Iranian traditional houses was live and joyful and had dynamic and mobile spaces. These houses were unique, the live houses which gave life fervency to the residents and this is the thing which is not seen in the contemporary residential houses. Human beings construct house because construction is cost – effective and it has been turned into a profitable work which has had irreparable effects on Iranian life style and culture.

- 1- **Spatial legibility:** traditional houses have spatial legibility. Perhaps, concept of legibility means orientation or spatial recognition. Legibility means that we can recognize all spaces and components of the house and link them in the mind as an interrelated form. Such quality in Iranian house permits the person to go from one place to another place with clear image of environment. Physical realization of this concept in these houses can be found while entering the house. When we enter the house, spaces are introduced on the basis of priority and importance they have and the most important parts and their ranks are specified in all spaces. Spatial form of the house direct the entrants on the basis of their relations with different parts of the house and a legible, clear and evident image in a visual word which occurred in mind of each person about an Iranian house. Legibility in house is a relation which the family members establish with space potentially or actually by reading it. This indicates the quality in house which creates clear image in mind of each observer. spaces in house not only are visible but also show them to all human senses as a place for life and legibility helps the person find himself in space and feel safe and be guided in that space(Naser Fakoochi).
- 2- **Simple but varied:** rooms are constructed in Iranian houses as Seh-dari, Panj-dari and Reception hall spaces each having its own specification. One of the interests of Iranian in construction of houses is to establish visual relation between room and external space. Openness and free view are part of Iranian nature even it holds true at present. In most places, three-door rooms are used but there was one-door room or large room due to weather of Esafahan . Pachang or mesh windows were constructed beside the door. In Iranian houses, architecture fulfills statics and tranquility. Architecture guarantees stability of the building and coldness and heat of the space. Architecture is responsible for protecting nature as a part of society self - consciousness in order to exploit sources of nature such as space, air, soil, wind, land and light. In any society of which cultures and beliefs are forgotten, its manifestations and mirrors of those beliefs collapse. In the past, architect created wonderful works with skill, knowledge and proficiency and with rich support and native culture which met material and spiritual need of human being. Such clear image of environment gives the person a safe feeling. He can create a balanced relationship between itself and the outside world and this is contrary to the fear feeling which dominates on the person. When the person loses his way and direction, it means that fresh feeling which the person has about house and city not only causes to have familiarity with it but also this is due to the accurate image in his mind (Kevin Lynch).

An Iranian house is a simple and plain but varied house with all kinds of different spaces. Plainness means that these houses are not decorated with additional and meaningless luxuries and appurtenances. In case that meaninglessness prevention is one of the Iranian architecture principles, variety of rooms (Seh-dari, Panj-dari , adjoining room) , variety of vault surfaces , lower house , upper house , variety of floor coating (water , tree , flower and vegetables) , all kinds of bricks and height variety and other cases have converted Iranian house into a varied space (Haeri). Variety of places and spaces allowed variety of routine actions. Roof provided an independent place for realization of functions as a defined place. Water in most houses, its flow and spaces resulting from directing and storing it add varied spatial equipments to the spatial structure of the houses. Children were in broad scope of spatial experiences from small and closed spaces to large, covered and open spaces. Spatial structure of the Iranian houses with its varied surfaces and spaces caused excessive and unlimited freedom and detection of many spatial experiences (Haeri).

This spatial variety which is caused by variety of spaces enclosure, light quality and airflow made residents of these houses sensitive to spatial quality as their perceptions of the house space included all of these varieties and can be described and expressed (Haeri).

Domain: Iranian traditional houses are spatial unit which creates a domain and personal space. Life style in Iranian house had been realized on the basis of broad scope of all human activities from thinking and watching flower and plants to holding populated ceremonies between two poles of public and private privacies. Public domain included some spaces such as alcove, five-door room and hall in which some activities can be performed such as hosting, mourning and holding different ceremonies. Family domain includes spaces such as yard, room and pool in which activities are performed such as gathering of the family members and some close friends and relatives and housework and personal works. Private spaces include spaces such as backroom, Do-dari room and Cellar or some activities are performed such as sleeping, taking rest, privacy, attendance of one or two persons in space. Domain border inside and outside the house is not a separating line, set of consecutive spaces of the portal, lobby and corridor distinguish between these two domains.

Introversion: introversion means a principle in architecture of Iran and can be understood and observed in different forms. In Iranian architectural culture, actual value is given to the essence and intrinsic core and apparent shell is a

figurative shell which protects a reality and of which internal and closed space determines essence and existence of the building and is not comparable to external space and aspects. Introversion seeks to protect an environmental privacy in which physical conditions with thought, deliberation and worships have been turned into balanced and high order in order to reach its origin and relaxation (Habibi).

Specifications of an introvert house include:

- 1- Lack of direct visual communication of the internal space with the external spaces
- 2- Different spaces have been organized by elements such As yard or covered porticos so that vents and openers are opened toward these elements. Lack of direct visual communication with urban spaces can be studied climatically and cultural. From the cultural point of view, hiding holy family privacy is an issue which has penetrated into thoughts of the Iranian developers after emergence of Islam by sanctifying family privacy and making it divine though it was raised before Islam. Yard and organization of different spaces surrounding it played important role for private life of the family members. This goal was achievable by creating a space in corner of a yard or out of the private environment or making another yard called external yard in order to increase introversion.
- 3- **Hierarchy in space:** Hierarchy in culture is one of the main bases of architecture. This hierarchy doesn't mean nobility and racism and class superiority over another class but a scientific principle. In these spaces, privacies are raised and respects are raised and the space itself becomes a part of privacy against another space.
- 4- With regard to classification of general structure of introvert houses into internal and external parts, principle of hierarchy and spatial continuation are seen from the entrance to the main part of the complex. This principle has linked houses to each other and it will not be possible to pass through one space to another space without observing spatial hierarchy and spatial continuity.
- 5- **Symmetry in space:** symmetry in Iranian houses with their harmony and rhythm will give balance and variety so that main spaces are located in direction of the main symmetric axes of the building and sub axes have been allocated to the sub and servicing spaces.
- 6- **Privacy in space of house:** one of the evident specifications of Iranian architecture is to respect spatial privacy in spaces of the residential houses. Perhaps, the most important factor effective on formation of this principle has been based on cultural –social structures which caused to create spaces with different functions. For example, it was impossible to pass through external spaces –public site to internal spaces –private site without respecting privacy in space in Iranian native architecture (Talebi –Mahnaz).

Specifications of contemporary houses: in contemporary houses , we find lack of natural and designed landscapes, decreased use of open space for activities with pause , closeness of spaces part and failure to expand them, experiencing openness for residents of the contemporary houses due to the smallest variety in height of internal spaces ceiling. It is evident that many technological and cultural changes have been made in our countries during years and have had effect on many aspects of the human beings. Since these technologies facilitate life flow, they bring 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).

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.

1- Variety

Spatial variety in contemporary house is very low. Very partial differences in color, light or partial difference in surface can be among such particle differences while house residents don't pay attention to such issue. Closed spaces of the contemporary houses have been composed of two separate and disordered spaces such as passageways, entrance spaces and even sitting room and guest room. Lack of clear definition for each one of these spaces caused an unclear boundary and separation from its adjacent space by setting some chairs and furniture. This factor causes to reduce importance of the space and increase role of objects in house so that even one space can be converted to dining room or sitting room by putting a dining table and setting furniture.

2- Spatial legibility

Spaces of contemporary houses are not so legible and it will be very difficult for the observer who enters such house for the first time to distinguish between bedrooms and bathroom, exit door, room door etc when the doors are closed. Spatial order of these houses is very limited and no direction is observed. After entering the house, we face WC and enter life space gradually and finally reach bedrooms. Generally, direction and orientation are found rarely in spatial structure of the contemporary houses and these are done by objects and habits.

3- Spatial flexibility :

In modern houses, each one of the spaces is designed independent and without regard to other spaces. Exclusion of all privacy and intermediate spaces which are found in traditional houses caused to delete spatial flexibility and ability to combine spaces in order to realize spatial expansion and landscape expansion concept from these houses. Each one of the spaces such as bedrooms is limited and defined space and the person enters another space in case of existing it and life conditions and current activities are changed completely in that space. Central part of the house in which most activities are performed lacks light and suitable landscape and has been turned into a narrow and closed space. Role of windows and openers in the contemporary house has been reduced to a frame for air ventilation and receiving light while open space has been reduced and private domain of the families has been intensely dominated.

Physical differences in the past and present traditional architecture:

Iranian traditional residential architecture	Iranian modern residential architecture
Introversion	extraversion
Function orientation	form –oriented and exhibitory
With hierarchy system	reduction of hierarchy system
Spatial enclosure	spatial openness
Private and public spatial separation	mixture of spaces
Lack of direct visual communication with urban space	With direct visual communication with urban space
View control and dominance	lack of View control and dominance
Role of wall in separation of privacies	exclusion of wall in privacy making

Comparison of Iranian traditional houses with contemporary houses

- 1- In modern world, we can design a place for waiting by getting idea from vestibule in Iranian traditional architecture in order to confront with the stranger entrance problems.
- 2- Design of the pause spaces in different points of the house in order to destroy and break center of the unit in house and scatter mind of other persons in different points and not to pay attention and concentrate in one zone
- 3- Design of bedroom for guests in a part far from family privacy
- 4- Design of separate service for other persons in case of emergency
- 5- In case of use of roof for spreading clothes and sleeping , the shelters with long walls shall be used.
- 6- Use of balcony with mesh walls and the surrounding walls and coverage will be effective.
- 7- In residential complexes, entrance doors shall be designed in the stories or the opposite units in the non opposite directions or opposite directions if possible to prevent from visibility of the inside part during use.
- 8- Use of two-layered or single –layered walls with insulators causes not to disperse noise and its reflection inside layers of the wall will be reduced and it will prevent from noise transferring to the adjacent units.
- 9- It is necessary to use thick walls or use insulating layer for separation and keeping audio privacy of the private spaces.
- 10- In order to give light to the residential unit and keep privacy, small windows with high O.k.B and reflex glass cover shall be used.
- 11- Use of sub corridors for linking between public and private spaces will make access hierarchy narrow and the space more private.
- 12- Separating private spaces from each other on the basis of private degree of each privacy such as all kinds of bedrooms for different persons
- 13- Use of natural and artificial ventilators in kitchen and WC and directing odor even toward roof and creating curtain or odor cover which prevents from uneasiness of the neighbors and other persons (example of contemporary house residential plan design in which traditional architectural concepts and principles have been observed).

Traditional houses spaces and contemporary houses spaces (table)

front entrance	vestibule
entrance filter	corridor
video door phone and camera	separate door knockers
private –public	internal –external
architectural arrangements –dimensions , form and height of windows	direct view control from outside
privacy making with help of internal design	spatial enclosure
considering preference of function over form	function orientation
direct view control after entrance with decoration	rotation of view angle and reduction of view control at the beginning of entrance
prevention from excessive extraversion	introversion

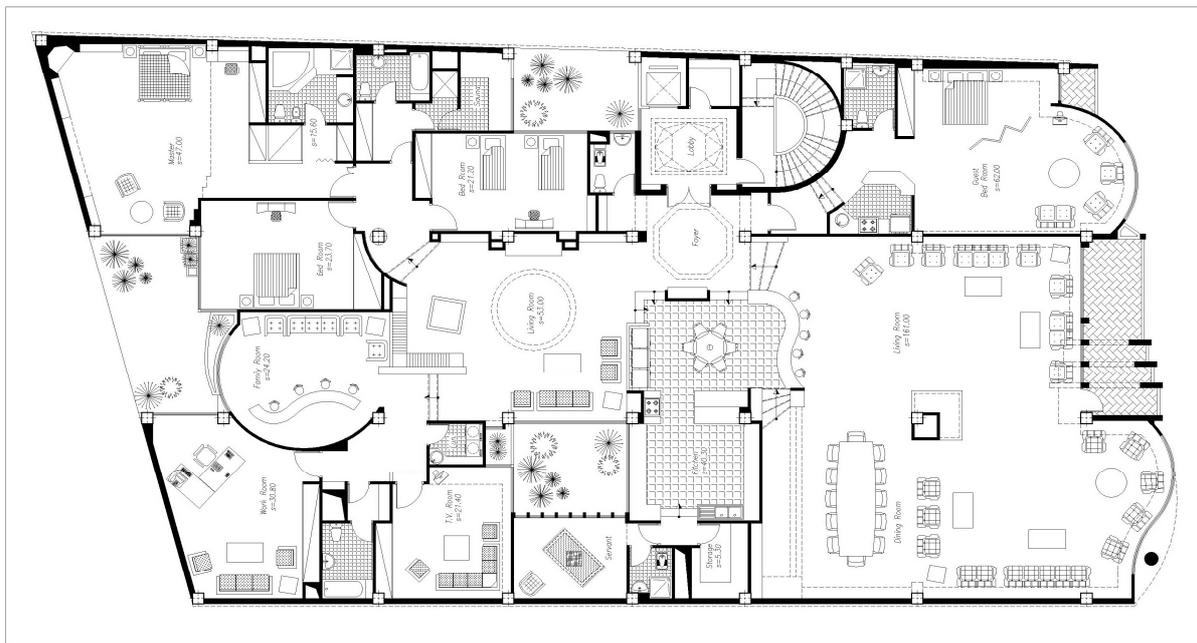


Figure 7: plan of contemporary house residential plan (designers, DaryaNosratPour, Majid Amir Ahmadi)

Conclusion

With elapse of time and change of life style, needs of the persons change though many spiritual and physical needs of the persons have not changed since the past 100 years up to now. For example, human being needs broad view, openness, airiness, and observing privacy and nature. Although traditional architecture is a valuable and rich architecture, the same architecture can't be executed in this period. Some valuable concepts such as spatial legibility, plainness but variety, introversion, hierarchy, privacy etc are hidden a heart of this architecture and architects and designers should try to use these concepts in modern architecture. It is necessary to give quality to the contemporary houses so that reviewing architecture of Iranian traditional architecture and extracting some concepts needed for modern life and injecting them into the spatial structure of the contemporary houses can successfully meet the urgent human needs and increase feeling of attachment to the place with regard to richness and ability of the Iranian traditional houses.

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