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## Study on Iranian Traditional houses and match it with contemporary housing

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### Abstract

Traditional houses enjoy an organizing with inner spaces based on religious and traditional notions of Iranian families. Space flexibility, readability, introversion, spatial hierarchy and family privacy have had a special status in architecture of Iranian houses, replaced with an outward-oriented architecture. The traditional architecture which has had all the necessary spaces for any communication inside the house has converted to the hotel architecture that its residents have not expected the stability and comfort from it, to whom just the equipment and services at hotel architecture are of great importance to which they have no sense and attachment. Living at contemporary houses has raised the problems such as reduced sense of belonging, comfort and emotional and family problems. The present research intends to compare traditional houses with contemporary houses by study on architecture plans of Iranian traditional houses and emphasis on their spatial richness and quality so as to get familiar with spatial concepts of these houses and take an effective step on how to influence these neglected concepts on single-dimensional spaces of contemporary houses.

**Key words:** *traditional houses, traditional architecture, contemporary houses, Iranian architecture*

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## Introduction

Iranian traditional architecture has always manifested the traditional-indigenous patterns in the past history of Iran, which these patterns have derived from the individual and collective culture of the people by whom such architecture has been developed, manifested and evolved. Study on Iranian contemporary architecture indicates that it has been subjected to abundant changes regarding the significant history of such architecture. This change and development has appeared as the apparent patterning of the architecture at other countries and inattention to this point that any use of non-Iranian patterns should take place by matching these patterns with the culture, lifestyle and social structures. The roots of the principles governing the traditional architecture can be traced in Iranian thought and culture; any building which is built has been targeted in meeting some needs of life. In this paper, the house has been examined as the most man-made throughout the history. Housing is not only a human shelter and the man does not dwell under a roof and on a few square meters. Silence indicates a meaningful bond with the place which can encompass each of various levels of our private and public life environment, so that such bond has derived from an effort to find identity for a place "sense of belonging". This is in a way that today's houses have failed to meet the earliest housing needs, i.e. physical comfort and relaxation and especially induction of quality expectations. An Iranian house has been a space to which the residents belonged. These houses reflect the principles which are consistent with the inner states of the man, found with a structure well suited to the worldly life and the hereafter; silence streamed with the real concept in these houses. It is obvious that the present research does not aim to persuade to mimic the architecture of the past, but aims to recognize these historical precious treasures, their spatial concepts and an effort for using them in contemporary houses. Our to-

day's architecture goes on with the conditions that use of the traditional patterns that have been being used in the past is not possible, because today the problems such as population growth, scarcity of land, and so for have gripped communities.

## Iranian house

"House" refers to a spatial unit that intertwines some of the features of the private sector with it regarding the related works. The house is a personal space and a territory, referred to a place to protect from the natural elements and others' intervention in private sector. The house refers to a place in the social world, i.e. it allows its residents to express themselves in a community which has formality; the house in addition to being a shelter for the individuals refers to a place for establishment of social unit which has existed at different eras of families. As a result it refers to a place for life of some individuals who have a close relationship with each other. The house provides the space for life of a small group, paved the way for reproduction and the human biological life. Further the space provides a reliable place to meet individuals' mental needs. In this way, however the house is not just the type of private sector; it is the main manifestation of the man's private sector, so that the house and family refer to the institutionalized arena of the person's private life.

## The spatial structure of traditional houses

Most of the residential houses can be witnessed with the sectors below:

### Podium

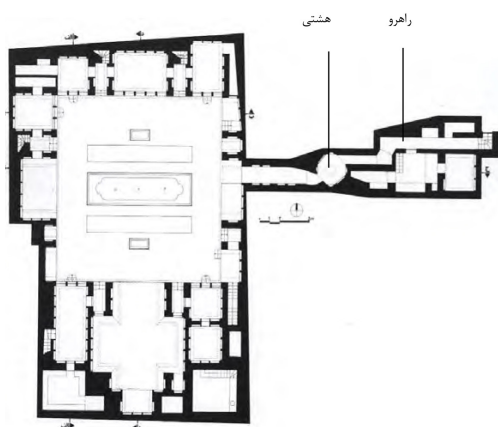
Local podium on both sides of the entrance, to relax while waiting to enter or dialogue said with neighbors.

### Entrance Door

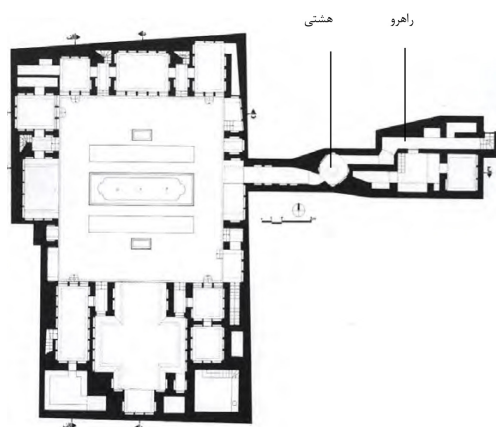
In most traditional houses, wooden double entrance doors and each door is percussion. Women ring was coarser voice to sound like the low voice brought men and percussion hammer.

### Vestibule

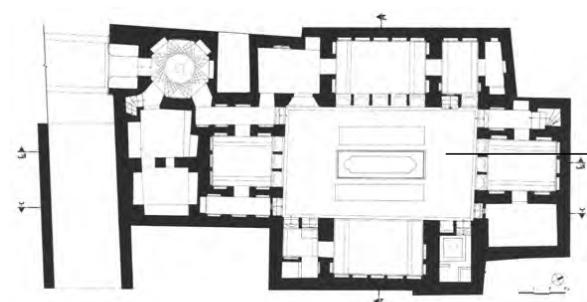
Often in the form of an octagonal or semi-



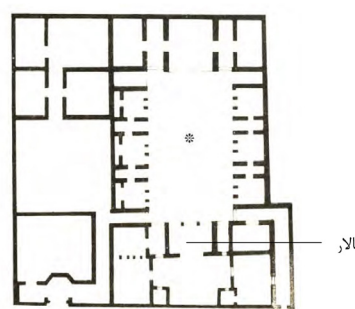
▲ Image 1. Plan of the first floor of Torab Home (Akhan Sigari House); source Ganjnameh Yazd houses, 2004.



▲ Image 2. Plan of the first floor of Semsar house; source Ganjnameh Yazd houses, 2004.



▲ Image 3. Plan of the first floor of Arab Homes of Yazd, source: Ganjnameh Yazd houses, 2004.



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octagonal, or more often 4 ears, short porch with a roof and a small opening in the domed light is generally platforms is designed to sit on it. Vestibules to split different parts of the house and then have access to a few houses were built. In large homes, and hotels within the vestibule servants were also often made to separate men and women as split.

### Corridor

With a maze of narrow corridors inbound from the porch to the backyard guided. A maze of corridors to protect the privacy of the house to passers-by can quickly see current activities in the yard.

### Yard

The old house was the center and heart of the building. With veranda in the central courtyard which features long ago, it was seen in Persian architecture. The local court holds events such as religious ceremonies, weddings and fam-

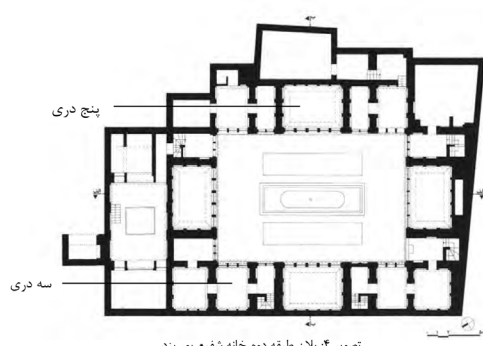
ily gatherings, respectively. Usually the square determines the number and the surrounding areas of life. The courtyard garden is a pond and, depending on local conditions such as climate and cultural factors will be in different forms. Hall space was generally very nice and busy with decorations in the simple rooms in traditional houses were clearly visible. Hall with bed, ornamented with painting on plaster, painting on wood carvings which were decorated. Drawing and rooms that were less important than the hall and rooms were simpler.

### Hall

Space was generally very nice and busy with decorations in the simple rooms in traditional houses were clearly visible. Hall with bed ornamented with painting on plaster, painting on wood carvings and was decorated.

### Kitchen

Usually, the kitchens were rectangular or square



▲ Image 4. Plan of the first floor of Arab Homes of Yazd, source: Ganjnameh Yazd houses, 2004.

and near water reservoirs and water wells were built. In the kitchen, a place for cooking and baking bread in the wall of the storage timber to put the means of cooking and food shelves have been built.

### WC and Bathroom

WCs and Bathrooms were usually lower. This is due to the ease of use of the water supply and drainage as well as it was the heat. The bathroom was divided into two sections, one for changing clothes (to see) and the other for washing (home heating).

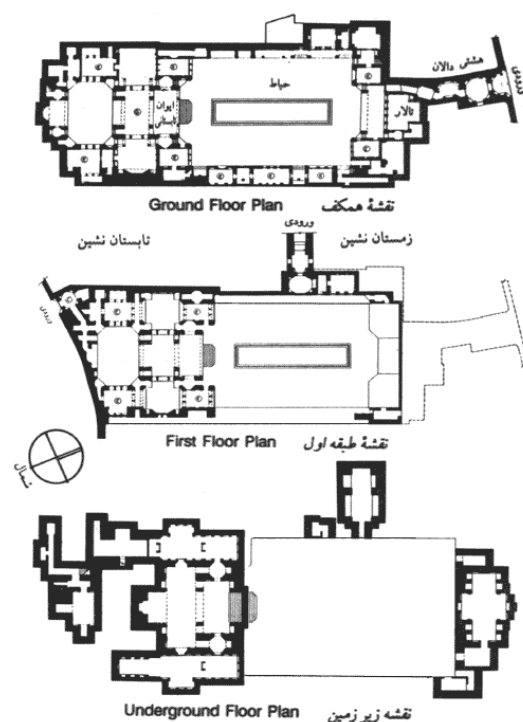
### Seat

Rooms that were less important than the hall and the rooms were simpler. Drawing was a gathering place for family and guests are very close to the elements of the decoration are very simple (Qaioumi Bidhendi, 2001).

Tabestan Neshin and Zemestan Neshin: in most of buildings which are built in this way, the Tabestan Neshin sector is of greater importance and designed in more than one storey. The connection between this sector, the hall space, the communication hall spaces and the Sardabeh which the height difference has been under the ground surface to 7-8 meter caused coolness in summer; separate from this, use of decorations, plaster and tiles at this site has caused excessive beauty at this part of building than other parts of building.

### Concept of quality in Iranian traditional houses

Architecture of Iranian traditional houses has been alive and lively, with dynamic spaces.



▲ Image 5. Plan of Borujerdis House; source: authors' archive.

These houses have been unique in their kind, i.e. the live houses which raise lust for life for the residents in a coherent form, and this is exactly what not has seen in the contemporary residential houses; the humans build house because it can benefit from building house; indeed building house has turned to a profitable task and this is exactly what remained with irreversible effects in Iranian culture and lifestyle.

### Space Readability

Traditional houses enjoy space readability, i.e. perhaps it can mention concept of readability with orientation or space detection. The readability is to recognize spaces and elements of the house and put them in mind in the interconnected form to each other. Such quality in Iranian house allows the person to move from a place to another place by having a clear image from the environment. Physical realization of this concept in these houses can be seen from the early entrance to the house, such that it will be introduced in entry to the house spaces based on the significance given to these houses and the most significant part and their

hierarchy. The physical form of the house conducted the ones entered to the house in terms of their connection to various parts of house; in one word, an image from an Iranian house in any person's mind has been a clear and readable image. Readability in house refers to a connection that family members make with space through readability in a potential way. This represents a quality at house that raises a clear image in mind of any person. Spaces are not just readable at house as a place for living but also provided the whole space to all the human senses, so that the readability assists the individuals to find themselves at space and feel secure in it and conducted to it.

### **Simplicity with diversity**

In Iranian houses, the rooms have been built in three-door, five-door and hall and etc. and each has had their own feature. One of the Iranian's interests in building houses is to make a visual connection between house and the exterior space of it. Aperture, spacious and having free vision are the elements of Iranian nature which is like this currently. In most of places, three-door rooms have been being used, but one-door room or large room was available in Isfahan. Further grille has been being built next to rooms. In Iranian house, the architecture meets Stability and peace. Ensuring stability at building and meeting coolness and heating at space come to realize with architecture; architecture as a part of conscience of society in parallel to exploitation from natural resources such as space, air, soil, wind, earth and light has been found in charge for protecting from nature. At any society in which the cultures and beliefs have undergone negligence, inevitably the manifestations of those beliefs have been drawn. In the past, the architect with his skill and knowledge, rich background and aboriginal culture has created amazing works which meet both the material and spiritual needs of man. Such clear image from environment gives a sense of security to the person. He can raise a harmonious relationship between themselves and the outside world, which this

is contrary to a sense of fear prevailed to the person. When the person has lost his way, this means that he has a sweet feeling that a person has from his city and house, not due to familiarity to it but due to a clear image from it in his mind. Home, familiar booth is done immediately, there is no need to select any direction not target search. The world was shaped in the home as simply cheaper. We can say, home is in the place of the occurrence of everyday life, itself. In your daily life, it represents something that we continue to maintain our support sits, and so provides familiar support. So what is the reason that despite the input of life in home should look into the world? The simple answer is that we can immediately provide that human being does not find the target of live at home, who takes the role that individual life is part of the collections of interactive procedures in which public duties are performed in order to find a part of the remarkable values. To participate, home leaving is accepted obligatory in order to share the main target. However, the social function after conducting the tasks, we come back home in order to find our personal identity and therefore, the personal identity is covered in the private residence. Had any home environment are not satisfied only to realization as low atmospheric qualities should the mood of the activities that need to be constructed. The primary task of every household: the disclosure is not as being precise but not in the form of (Call) in terms of color, writing the plants, weather, climate and light. Such disclosure using two complementary methods is emerged: with the help of openness to the world around, and will help supply the world Kenji to retreat. However, this corner of retreat place where the outside world has not forgotten, but his memories of the world where the people gathered to where they are with everyday life, eat, sleep, talk to your games back. In addition, the corners can be called a place of retreat would map the phenomena which are lyophilized will appear (environmental forces).

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It is a common fact of life at home. After retreating into the house, not in the sense of isolation but also shows different kind, a private residence is indeed, a stimulus. These agreements is really driving that makes direct contact with phenomena, therefore, the well-known Swiss psychologist presents as to the house as a space (a collection of love) which is actually introduced some remarks that the holiness of love is more resistant than (domination a) to be accepted. We can add mechanisms that love is the primary emotional state leading the emergence of the other creations as possible.

### House Territory

Iranian traditional houses are the spatial unit which raise a territory and a personal space; the lifestyle in Iranian house has come to realize based on a wide range of all human activities including thinking and watching the flowers and plant to holding populated ceremony between the two poles of public and private privacy. Public territory includes the spaces such as Shah Neshin, five-door and the hall with the possibility of holding activities such as parties, ceremonies and celebrations are different. Territory is the area for family included of the spaces such as yard, craft room and pool house, in which the activities such as gathering of family members with each other and a few number of friends and relatives as well as personal tasks are made. The private territory includes the spaces such as two-door and Sardab with activities such as sleep, rest, silence and presence of one or two persons at space. The territory border inside and outside house in Iranian house is not a separating line, that a series of continuous interstitial spaces of the doorway, vestibule and corridor represents the distinction between the two territories from each other.

### Introversion

One of the beliefs of the Iranian people and the sanctity of life is that it is so introverted architecture of Iran. There is clear and present is perceived in various forms. Basically, in or-

ganizing various organs, especially the building houses are related to the traditional beliefs of the people, it has worked, separated, and only the two together had a porch. Two corridors, one external and the other from the interior of the house had a porch way. Within the family and the way, they were aliens. Exterior, special guests and strangers were separated and sometimes guests in the upstairs dining (room on the porch), which is within close. The welcoming exterior part found in more interior. Architects, even eccentric buildings such as the palace gardens, also had to pass introversion. Eccentric palace buildings were opened around the sides and open to the outside. More homes are in the West or the East Asia. In some countries, Iran's eccentric house can be built. Such as Kurdistan, Lorestan and northern parts of Iran, but the country's middle and hot and dry, introverted houses, the answer is in the room to air dry, irritating wind, sun and sand dunes are steep; Undeniable architectural features of buildings such as houses, mosques, schools, and etc. The bathroom of the house on an introspective character is deeply rooted in the principles of social-philosophical this country. So is not comparable to the funds and outer space. According to Eastern thought, in general and in the Islamic lands, the essence of the inner space and the inner courtyard is to create the space.

### Hierarchy at space

Hierarchy at culture has been regarded as the major basis of architecture. This hierarchy does not mean aristocracy, racism and class supremacy to another class, but it is a scientific principle mentioned with any need requires a preneed, so that in these spaces the privacy is taken into account and self-esteem is raised so far as a part named privacy in the space against another space is revered. With regard to the division for general structure of introverted houses to interior and exterior part, the hierarchy and spatial continuity are seen from the entry to the major part of building. This principle has interconnected the fabric of houses

in such a way that transition from a space to another space will not come to realize without compliance with spatial hierarchy and spatial continuity.

### **Symmetry in space**

Symmetry at Iranian houses with rhythm raises diversity and balance in such a way that the major spaces have placed along the axes of major symmetry of building and the more minor axes have assigned to the minor and service spaces.

### **Privacy in traditional Iranian houses**

The Iranian architects, introspection and pulling the sunken garden and porch and yard and entrance opening and the foreign caps that took around the trace as being attractive and intimate environments created has long been a part of the logic of Iranian architecture. It is also influenced by the culture and beliefs of the Islamic faith and the laws of life and culture of Iran and the different aspects of life, including architecture are overshadowed. The hierarchy of space (the footsteps of the alley or the street entrance to the house and private spaces) as well as the inside and outside is desired including the necessary measures to ensure privacy; Home organization as well as the climate and security-oriented addition to factors largely influenced by cultural factors, religious and social; Separation of domestic from foreign fields of the most introverted factors in the architecture. In this type of domestic architecture to the specific social, cultural and religious (such as mosques, mosque, schools, etc.) or in residential areas as a private space for family life, physical and perception of public space has been separated out and often the connection between inside and outside the arena or by joint elements of the transition is made. It is large and bright. The sequence space with a variety of special perceptual quality creates its own space. Perceptions about different areas of design space and create their own means of account hierarchy is at the entrance and communication arenas. Also, women in Islamic culture required spe-

cial conditions, alone. In this architecture, everyone is allowed to enter the family's privacy. In traditional homes, we have for the different tools used to identify the gender of the person back to the landlord possible. Two metal rings for women and men on most doors Kobe, there. Iranian Architecture in Islamic culture made the integration of art in the world in the name of Islamic art and architecture will be presented which have an opening. Connecting inside the house with outer space in a way that was not there today, was completely secure and private residents visit this private home is not any pedestrians. Design houses are often introverted, there is no window and a window to the outdoors and provide natural light through the central courtyard was being done or ceilings.

### **Features of contemporary houses**

In contemporary houses, due to the absence of the slightest variations in ceiling height at interior spaces, Lack of natural and designed landscapes, reduced use of open space for activities with pause, lack of possibility to extend spaces, the experience with vitality rarely takes place for the residents at contemporary houses. It is obvious that numerous cultural and technological changes have taken place over the years and influenced numerous aspects of humans' life, i.e. since these technologies facilitate the life stream, they raise the culture of inventors. A culture has imposed numerous damages on the Iranian culture and lifestyle due to numerous differences with Iranian culture. These mandatory physical and conceptual changes from the past to today have raised general changes at the front of house on one hand and interior space of house on the other hand, including the change in physical geometry of house, change in infrastructures, the ground size, sparsely populated households, willingness to independent life and so forth which each plays a major role in transformation of house. The spatial pattern which today exists in contemporary houses is a surface pattern which deals with the surface

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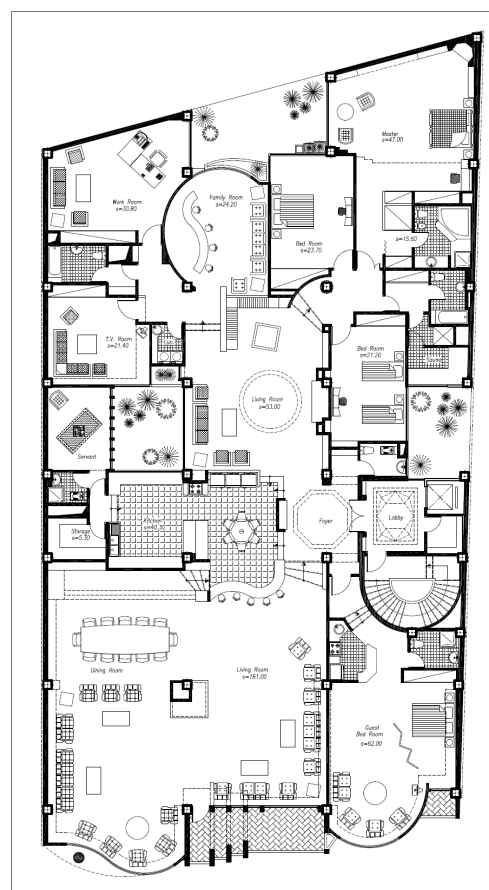
and square meter, i.e. the surfaces which have been embedded based on the sizes and functions to meet the early biological needs. At the contemporary and modern age, the State and municipal policies and planning in the context of urban spaces, housing and mass production have had an effective role in culture of contemporary house. Under the modern technology and advancement in science which have caused population growth, traditional methods no longer meet the man's need to housing. Expansion of cities and urbanization which have taken place as the result of industrial revolution and developments after it proliferated every day; further the modern urbanization raised a different social pattern in terms of housing to modern man and contemporary man. Yet modernity development and its effects on man dwelling pattern is not just limited to the population growth and increase of houses and man's dwelling, but more importantly modernity and its processes influenced quality of house and dwelling of modern and contemporary man. The standards of new house and dwelling include:

### Diversity

Spatial diversity at contemporary house is little. Few differences in color and light or little difference at surface can be called as manifestation of these few differences, while the residents of house do not respect this issue. Closed spaces at contemporary houses have been developed from separate and irregular spaces, which most of spaces such as entrance spaces and seat are of irregular spaces. Lack of a certain definition for each of spaces has caused no certain border for them, separated from their adjacent space by arranging some furniture and chairs. This causes the significance of space diminishes and the role of objects at house increases, so that often a space can convert to the space for dining room or seat by arranging one dining chain or several furniture.

### Spatial readability

The spaces at contemporary houses are not



▲ Image 6. Plan of residential contemporary house; source: authors.

readable enough; detection of bedrooms from bathroom, exit door, door of room and so forth with the closed doors will be so difficult to a supervisor who steps such house for the first time. The spatial order of such houses has been usually very limited for which no direction is considered. Usually after arrival to house, we face toilet and gradually we arrive at living space and ultimately we reach to bedrooms; in general the issue of orientation has existed so faded out in spatial organization of contemporary houses and made by means of habits and objects.

### Spatial flexibility

In modern houses, usually each component of spaces is designed independantly and regardless of rest of spaces. Omission of all the privacy and intermediate spaces which are witnessed in traditional houses has caused omission of the spatial flexibility and the capabil-



Traditional residential architecture of Iran	Modern residential architecture of Iran
Introversion	Extroversion
Performance Oriented	Form-based
Hierarchical system	Reduction of hierarchical system
Spatial enclosure	Spatial openness
Separation of private and public space	Mix of spaces
Lack of direct visual relation with urban space	Direct visual relation with urban space
Control on dominance	Lack of Control on dominance
Role of wall in separation of privacy	Omission of wall in privacy

▲ Table 1. Equivalence of traditional houses and contemporary spaces; source: findings of research.

Porch	pre entrance
Corridor	entrance filter
Separate Kobe	video camera
Interior-exterior	Public-private
Control on direct vision from outside	Propose the architecture provisions; dimensions, type and height well suited to windows
Spatial enclosure	Making privacy via interior design
practicability	Attention to priority of function on form
Rotation of angle of vision and reduction of dominance at the arrival time	Control on direct vision after arrival by means of decoration
introspection	Avoid outline

▲ Table 2. Equivalence of traditional houses spaces and contemporary houses spaces; source: findings of research.

ity for composition of spaces to achieve the concept of spatial extension and vision extension of these houses. Each of spaces like bedrooms are the limited and defined spaces that the person enters to another place in case of exit from it and even the current activity in that place changes thoroughly; usually the central part of house in which most of life activities occur lack suitable light and vision and appear with an enclosed space. Role of windows and openings in contemporary house in parallel with reduction of open space and increase of dominance on the private territory of family to a frame to ventilate air and receive light has diminished.

The physical differences in the traditional architecture of the past and now have been pro-

posed in tables below.

### Conclusion

By the passage of time and change in lifestyle, the humans' needs change. However most of the human's physical and spiritual needs have not changed since one hundred years ago to date, e.g. the human requires openness, protection from privacy and nature. However our traditional architecture is an enriched architecture, that architecture cannot be performed again at this age. Yet the valuable concepts such as spatial readability, simplicity with diversity, introversion, hierarchy, privacy and so forth have lied at the heart of this architecture that the designers and architects should try to use these concepts in modern architecture. Indeed, what seemed required lies on the necessity to return

quality to contemporary houses regarding the empowerment of Iranian traditional houses in meeting this need, that a once more outlook to architecture of Iranian traditional houses and extraction of some of the required concepts of modern life and their influence on spatial organization of contemporary houses enables to meet the man's essential needs and increase sense of belonging to place. The factors below can be mentioned in matching the spaces of Iranian traditional houses with contemporary houses:

- In today's world, it can design a place for pause to wait by getting idea from porch in Iranian traditional architecture for exposure with the problem with alien's arrival
- Design the pause spaces at various areas of house to omit Centrality at house and distract the others' mind at various areas and ultimately inattention to one area
- Design of special bedroom for guests at a part separate from family's privacy
- Design of a separate service for use at necessary occasions
- Use Shelters with tall walls in case of use of the roof to spread clothes and sleep as much as possible
- Use balcony with latticed walls and build walls around it and cover the surrounding
- Use double-walled or single-walled walls with insulation causes lack of dissemination and movement of sound to surrounding and omission of echoes of it inside the wall layers; further the transmission of sound to adjacent units will be avoided
- Use of thick walls and use of insulating layer to separate and protect audio privacy of private spaces
- To supply light at residential unit and protect the privacy, the small windows with high O.K.B and reflex glass cover should be used
- Use of minor corridors to connect public and private spaces will assist narrowing the hierarchy of access and privacy of space
- Separate private spaces from each other; separate privacy degree of each of privacies including a variety of bedrooms for various

individuals

- Use of natural and artificial ventilations in kitchen and toilets and conduct smell to roof to prevent disturb to neighbors and others

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