



**3.th International Congress on Civil Engineering , Architecture
and Urban Development
29-31 December 2015, Shahid Beheshti University, Tehran, Iran**

Iranian traditional architectural features (Case Study: Boroujerdi House in Kashan)

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Abstract

Iranian architecture is one of the richest examples of vernacular architecture with notable achievements in the world that form and Niaresh over time to one of the successful examples of conceptual architecture, meaningful, and that creates a mystical conversion architecture has high spatial quality. Achieving to spatial quality as one of the main goals of architects and researchers in this field always been considered that pay attention to optimal and efficient space past and also considering human experience and the human knowledge are necessary. Trying to design spaces that have the potential to communicate with human beings and their physical and spiritual needs more than ever is Considered by designers and architects. Thus, considering traditional architecture and its components with the function and purpose of each components of the architecture, in order to enhance the quality of architectural space is a valuable approach. This study followed the first Persian architecture and its components to identify and achieve the architectural quality and then to examine the spatial hierarchy in this architecture will use Software syntax. Thus, to achieve this purpose, Iranian house that is representative of Iranian architecture and considering the importance of this building as a family hearth and as one of the most sacred sites of human growth and development has always been the most important and influential space direction it has chosen. That here In particular Boroujerdi house in Kashan according to criteria such as: responding to performance, privacy and confidentiality , aesthetics principles and etc selection and applied research with a descriptive study based on library resources in a process step by step Boroujerdi house in Kashan gives analyzed.

Key words: Iranian architecture, spatial quality, syntax, house Boroujerdi, Kashan



1. Introduction

Iranian ancient architecture was valuable and proud and was a dignity for both soil and human being. It qualified the degrees of efficiency, perpetuity and beauty and went toward Excellency. It was a rendering of Divine revelations and an expression of unity, dignity, knowledge and wisdom in bricks, adobes, stones and tiles (Ekhlas, 1393). Iranian architecture is one of the richest examples of ethnic architecture with notable form and stasis achievements in the world, which has become a successful sample of conceptual, spiritual and mystical architecture through the history and has created high spatial quality architecture (Nazif, 2013). Many factors are contributing in creation of this quality such as relaxing space, privacy, hierarchy, and relevance to the specific climate of each region, etc. In this regard, concerns for creating a high quality in architectural space as one of the main goals of architects and researchers in this field has drawn their attention to the concepts and methods, whose principle has been relying on human experience and the identity achievement and prescience sequence of previous generations. Thus, for recognition of Iranian architecture and its spatial quality, one should proceed to understand its concepts and elements (Tarbiyati, 2012). Among other things, the identification of factors, which cause this quality, appears important; hence, regarding the aforementioned issues, this study seeks to answer these questions: what are the features of Iranian architecture? What do the elements constitute Iranian traditional architecture?

Several researches have been done in the literature of this field, some of which are presented: Ebrahimi et al. in a study compare to Spatial pattern of Iranian traditional houses and contemporary architecture, and reported that the design of traditional Iranian houses used models that these patterns are affected by several factors, including climate, culture and more. During review, they attended to existing spaces in a traditional house and arrangement of these spaces into a spatial pattern and concepts involved in creating this model. Shahin & et al "in 2014, one of the spatial patterns of Iranian architects of the" hierarchy of space "have placed investigated and concluded that the use of this architectural pattern, in improvement of quality of life has been effective." Mousavi" in 2014 in a research case study houses in Kashan desert, by using Analytical method and using field studies and library review and check three examples of traditional houses Kashan ranging from home Abbasids, and Tabatabai Boroujerdi disc. They stated that archetypes of Kashan, is native and adapted to their desert area and this issue in featured and having their identity plays a major role. Thus local patterns of Kashan houses may have the same name by other areas but patterns are special in design, proportions, layout elements and other factors; and this is uniqueness that are created identity and character. Svhangyr et al. in 2014 in a research presented a definition of space that theme states as encompasses human space and surrounding. Therefore human perceptions of space become important; as a result, in the contemporary era, scholars are thought to provide models for improving the quality of architectural space. If more we can clarify past patterns and parameters used



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in the carefully challenge, the possibility of designing Spaces is more favorable. "Yazdani et al" in 2012by finding the proportions of the central courtyard of Iran proposed definition for these areas so that they can represent performance modern spaces of it and examine alter the proportions ruling on central courtyards of traditional houses Kashan during Qajar. In this direction has been studied some physical properties and dimensions and the proportions of 10 central courtyard of the house in Kashan. 'Dastyar and et al "in 2013, by using descriptive, analytical and data gathering practices by field studies and theoretical basis and with the help of phenomenological and historical research, observation and review them identify the pattern's central courtyard, and have to check iranian traditional architectural features in hot and dry climate. "Bayat and et al" in 2013 Presented the introduction of a central courtyard houses, the city and the climate of Kashan, a general classification based on the geometry and dimensions and the proportions central courtyard in Kashan. Finally, after analyzing the results, have offered a range of proportions depending on the weather conditions for climate of Kashan. The results of research showed that the amount of sunlight significantly related to the depth of the yard and the yard stretch have less impact on the amount of energy in the summer and winter, Also the use of courtyards by vertical stretch have better performance in terms of energy absorption in summer and in winter. In general, according to more difficult weather conditions in summer, proposed use of deep yard with regard to each of the stretch. "Rasul-Zadeh and et al," in 2012by analyzing samples of desert houses that have a central courtyard, they have found to Volumetric composition or specific composition in plan of these houses and their effectiveness in creating of introspection and intimacy as dominant culture and were extracted results in this direction. "Mary Girani and et al" in 2012, check out Recognition the role of the central courtyard of the house Boroujerdi. And found that a central courtyard is as an important element to achieve the climate for human comfort and energy saving arises and as well as in human connection with nature plays an important role. Due to the quality of the human environment and concerns the desirability of promoting architecture forms the most important aspect of this research. Trying to design spaces that have potential capacity to communicate with humans and their physical and spiritual meet the needs one of the issues that now more than ever considered by designers and architects. Thus, attention to the traditional architecture and its components with the function and purpose of each of the components of the architecture, in order to enhance the quality of architectural space is a valuable approach.

2. Objective and Methods

This study aimed express the effect of recognition of traditional Iranian architecture and its components in the creation of Iran quality in architecture that cause worth taking the this architecture has become in the eyes of everyone, Seeks to introduce and review Iranian House as representative of this architecture in the formation of the



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spatial qualities of traditional architecture in Iran. So paid first to know basic concepts including Iranian house and elements of traditional house and then selection Boroujerdi House in Kashan according to many criteria, such as responding to performance, privacy and confidentiality, the principles of aesthetics and etc .This research analyzes the house in an applied research and descriptive - analytical method by referring to library resources in one process step by step.; and in this way will use of software syntax to investigate the role of the central courtyard as a communication space and the interface between other spaces.

3. Software Syntax

A set of theories and methods that pays to phenomenological space and can mention it as one of the most important contemporary methods of morphological space. In the simplest explanation ,we can say that it is a set of methods and theories that pays to study configuration space in architecture and urban scale .this software explain the interaction space, social organization, and social behavior. Configuration space is as the core of conceptual-spatial analysis that has been developed based on graph theory, in this method space systems not based on geometric methods, but they are analyzed based on the topology.

4. A Case Study

1-4-The introduction of Kashan

Kashan city with a population of over 400 thousand people and about 2,100 hectares Located in the province of Isfahan at 51 degrees 27 minutes east longitude and 33 degrees 59 minutes north latitude. Desert Kavir surrounds the northern and eastern areas of Kashan but the height of Karkas¹ by Bungalow and mountain climate affect these cities. Kashan is an excellent position for placement on the way main artery of Country.

2-4- Boroujerdi House in Kashan

Construction of this house lasted about 18 years by 25 architect and artist and it built during the reign of Nasereddin Shah and between years 1280- 1292. And now has passed 130 years old of this house. Boroujerdi's house built in an area of 10700 square meters, and the building area is about 3000 square meters and consists of two inner and outer courtyards. And consists of two main and auxiliary input, and two polygon-shaped vestibule and labyrinth entrance halls, halls, courtyards, living summer, living winter, kitchen, covered courtyard around and vast underground(Mousavi, 2014). And generally have 9 rooms, backyard, and a simple Panj Dari room, a large cellar in the southern part of the house that is on the inside and have a central courtyard, part of the summer, cellar, kitchen and warehouse in the outer section. More traditional

¹ Name of a mountain in the province, attached to the Karkas mountains Kashan

houses Kashan have in three or four sides of the courtyard in the room but Boroujerdi's house in the East and the West not have the room and this was only due to ground conditions (Nilforooshan, 2007).



Figure 1: North view Boroujerdi House in Kashan, website number one



Figure 2: Plan ground floor, first and basement Boroujerdi Kashan, website number one

5. Definition basic concepts

1-5- Definition Pattern

The purpose of the pattern is Intellectual and general (for example, objective and individual) that is responsible establishment of order and relationship between elements of architectural space in order to meet the needs and desires of the man.



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Architectural patterns are the result of human experience and tools for the production of architectural form and space. In a holistic approach, effect of architecture is as a system that pattern is the order and the relationship between system elements. Christopher Alexander speaks of generating rules, means patterns that combine and organizes elements any combination(Dehghan, 2011). Most important application of pattern is create forms and architectural spaces based on the order and specified relationships and experience. Pattern can only take physical shape according to the context and need of the day in various forms, or in other words found object in space and form, without result space, repetition or imitation of the former space. Only when a pattern appears that the established order between elements in space created through trial and error, in a repeatable process in multiple spaces and forms, can give an appropriate response to the demands of the community of space (Soltani, 2012). Pattern recognition requires a combines very of layers and a number of factors that can be achieved by various analytical methods (Bell, 2003). In iranian architecture We have combine and multiply shapes and their complexity but can be found in the principles and patterns that are present permanently in the architecture and shown various forms and evolved itself (Ahmad Jamei, 2013). Patterns eliminate the possibility of forming different plans and designs by imposing restrictions and while they still allow the formation of an unlimited projects (Mousavi, 2014). Each spatial pattern reflects the natural relationships, social and spiritual individual and society (Haeri, 2009).

2-5- Iranian house

Each frame comes in the way of a conviction and settlement patterns we as General framework that surrounds activities and the fields of life and the pattern of our living space, stems from our belief in life and in the belief together in a heart all humanity. However, humans have chosen a variety of patterns to live and this reflects the facts that have different interpretations of the concept of residence to humans (Municipality of Qom, Mirmiran, 2013).

Iranian house as the representative of Iranian architecture and considering the importance of this building as a family hearth and as one of the most sacred sites of human growth and development has always been the most important and influential space that responded beautifully to all the objectives your audience, because iranian house an institution that has been created in line with a series of complex reasons and not merely a structure. Since build a house, is a cultural phenomenon, form of house, organization and space system strongly influenced by the cultural environment that house belongs to it; in fact, role of the house, is creating a social unit space. Housing not only as shelter but also as a breeding ground of human is important in first and most basic social unit, namely family (Municipality of Qom, Mirmiran, 2013). In Iranian house many factors influence in formation of housing and shelter that can point in addition to climatic factors and environmental conditions ,that led to the construction of the shelter is made for human, to cultural factors - social role that



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have very important role in the formation of man-made spaces. Although can not be considered ineffective the role of physiological needs of human and economic resources available techniques and materials in the production of architecture, While will be highlighted the role of sub-like ideology, beliefs, customs and traditions, ways of life, social and psychological needs of people in shaping individual living spaces, especially after the shelter's needs (Nazif, 2013). In Iranian house exhibited Coordination between the elements of space and proper positioning by the use of patterns and geometric forms and create a hierarchy of the elements of, discipline and unifying.

3-5- Physical elements of traditional house of Iranian (Iranian house organs)

Iranian architecture have indicator elements that creates a unity in Iranian architecture despite the Cultural and the climate differences existing in different regions of Iran, that cause the introduction of this architecture as one of the world's architectural style. Therefore, in this part of research has been introduced Physical elements Index of Iranian architecture and briefly listed in Table 1:

1-3-5-Landing sill (Draygah)

As part of building that movement is carried out. Landing sill is Port, or Kryas vestibule, corridor or hallway (Nilforooshan, 2007).

2-3-5-Front and the entrance

Front of house, in front of door is as retreat from passing and two platforms on either side of named Pakhrh, That represents non-violation of the rights of others, value the relationship with neighbors and create space for pedestrians to rest in the direction of movement and the right space to see off and welcome guest (Nilforooshan, 2007), that is good this tradition in terms of religion. Draygah view out and over the mass of people, is one entrance. What was out of the house is only entrance (ibid). Entrance determined only outside the house.

3-3-5- Vestibule and hallway

Vestibule is intermediary space between. Because the house has privacy and do not come out at once into the sanctuary. Vestibule was sometimes eight sides but sometimes in other forms. The main port vestibule, walk down the corridor. The corridor is a corridor or hallway that leads you to Myansra (Nilforooshan, 2007).

4-3-5- Myansra (central courtyard)

Myansra been open section and without canopy house. Various rooms built around it that would have been open to it (Nilforooshan, 2007). Surrounded yard by four sides of room, or at least the wall, causing it has been called the central courtyard. Order of (means) the central courtyard is an open space in the center, next to or around buildings that is crucial for improving thermal comfort especially in hot and dry regions. In town houses such as Kashan has done their yard as a small garden. Myansra provides pleasant medical environment throughout the year Iranian golden ratio and orientation of its command, and receives from rotation of the sun and sunlight, best use for its surrounding spaces. Orientation of Myansra is

Result geometric drawing rectangles in hexagon. Located in the northern part, Myansra spaces for to receive winter sun. And to respectively in the south that is in the shadow exist summer living spaces and in the East that is Facing to the annoying sun , there are less important spaces such as storage and sorting that take from the ceiling light and are less likely to have door to the yard. And have diverse pool in the yard in shapes such as Iranian hexagonal, twelve-sided, or rectangle with golden proportions (Pirniya, 1992). In the Iranian courtyard in addition to climate issues, issues including privacy and introversion and ... is causing forms a central courtyard.

5-3-5- Room

More rooms are open to Myansra. Iranians have always wanted inside the room and outside it, that Myansrayy was Green Field, To the vision. Openness and broad and open new nature mixed to the nature of Iran. Given the number of room openings were named as three-door, five-door and ... (Nilforooshan, 2007) (Memarian, 2010).

6-3-5- Hall and tanby

Hall said to Great and stretched room that use when coming guests. If hall is not open to Myansra and was in the other room t is called Tanby. Tanby was a very consistent with the summer heat and winter cold. This space did not have to Myansra, doorways and windows, and exposure of the canopy and canopy made it more layer to keep the air inside cool (Nilforooshan, 2007).

7-3-5- Rooms winter living and summer living

Always been discussed in Iranian architectural debate, discuss internal migration according to the climatic conditions of each season in the house; That accordingly divided house to the winter living and summer living: Part of the house on the north side yard, is part winter living that winter sun are willing to tolerate it and have more heat, (Qobadian, 2010). Spaces like Tehrani, three-door (Sedary), five-door (Pangdary), Bala kaneh and House seats (Korsy Kaneh) are in this category. Hall of winter living (Facing the sun) have properties including the spaces films, short ceiling (for rapid heating spaces) and fireplaces for heating spaces in This Section. The opposite happens in the summer, and rooms on the south courtyard with shade and are cool, Residence of the family who is living there, is named summer living. It also called Nesar (Shadow Catcher and cool). In this section there are parts of the summer living Such as a basement, hall, spring house, Payab, Tanby, (bedroom and break room between hall and deflector) and mostly basement (basement where the temperature is lower than the temperature of other parts) (Qobadian, 2010). That Figure 3 shows a longitudinal section Boroujerdi House in Kashan in Iran as the sample house of Iran, that dominated Part summer and winter living and also Part height difference between the two is clear.

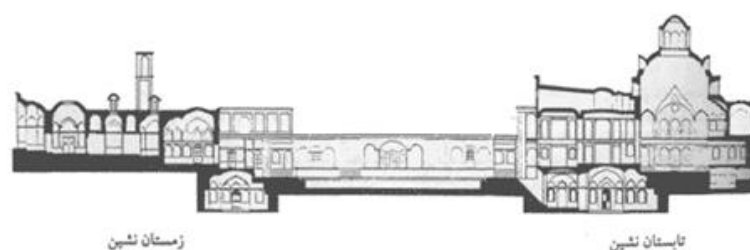


Figure 3 : Cross-section of Boroujerdi house in Kashan, website

This attention of Iranian architects to climate is causing houses with feature four seasons. Adapting lifestyle with climate is very important characteristic of traditional Persian architecture particularly in hot and dry areas of Iran. Prominent example of introverted houses in this region is known to four seasons house (Qobadian, 2010).

8-3-5- Basement (Sardab)

Due to the warm weather prevails in most parts of Iran, therefore Iranian architect is compatible with these conditions by the initiative technique of cellar or basement that have Level difference a few steps from the yard. And also have used it to store and a cool atmosphere to relax. And is most important space in the summer. That is usually the basement into two types: one "Ziere" that is not having windows and doors to Myansra and "to" that have windows to Myansra (Memarian, 2010).

9-3-5- Near water (Payab)

This is Very cool space in the lowest part of the house. In this space is intended Rosen parts to pass several of subterranean water and its transition from Payab. This is usually octagonal shape and arch Trkyn and Klnbv. The amount of near water (Payab) is cool enough that some types of food placed there for not bad in the summer.

10-3-5- Porch

Porch is semi-open space. That is used to connect the outdoor space courtyard to closed space of house or rest house residents in the hours of the day and also for eating and meeting family members and do other chores around the house. Iranians especially used of Porch in the summer as a major part of the house (Eklash, 2014).

11-3-5- Kitchen

Kitchen is usually includes parts of water supply, the pantry, kitchen, storage and well house. On the horizontal level is Matching with Square and rectangular and the plan is also Can be changed based on the general map. Around of Internal Space the kitchen consists of ovens, bread oven, woodshed, and platforms to a height of approximately 80 cm until Providing the possibility of cooking and picking of equipment and organization of work Cooking. The place kitchen is on the second layer and n connection with the the entrance porch and part of the winter living and also is close with guest room and located also part of the house that would have access to water through Waterline. Accordingly located generally in terms of vertical axis adjacent Payab (Eklash, 2014).

6-Discussion and Results

Charles Moore says: "When a floor and a roof and four walls, a room was built, along with a six-element, the seventh element is space that this element is more effective than the physical elements." But in first the quality of this space is depends on the components of it, such as the dimensions of the elements, the position of of elements relative to each other, kind of elements (sexually, surface, texture and color), opening or openings etc. And secondly, and more importantly, the relationship between these elements together; established the relationship between the architectural space through patterns and according to certain rules. Hence the



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utility of space and architectural form depends on To understanding of the meaning of space, also Understanding the meaning of space depends on the existence of the system (organization) and spatial patterns (Soltani et al., 2001).

Table 1: functional analysis of elements Iranian architecture from Theoretical aspects

Space name	Traditional house physical characteristics
Platform	<ul style="list-style-type: none"> - Location on both sides of entrance - Location for repose when waiting to enter the house
Portal	<ul style="list-style-type: none"> - whatever was visible of out each house - The first element in the introduction of house - Framing Protruding of wall surface - fovea than passageway - possess Decorative
Entrance door	<ul style="list-style-type: none"> -Without any visual contact with interior of the house - possess Double piece and Double Doorknob(gyrate Doorknob for women with treble and Stiff Doorknob for men with base)
Vestibule	<ul style="list-style-type: none"> - Pause and space division - A place to waiting - Deviation Creation in visibility - The difference between the inside and outside - Cover vision and Creation Reverence for habitants based on a difference and distinction inside and outside
Corridor	<ul style="list-style-type: none"> - Other Names: Hallway or Vestibule - Roofed access space - having maze for privacy House - Symbol of focus and get to the opening space and privacy in architecture
Porch	<ul style="list-style-type: none"> - The point of transition from earth to heaven - Pause space - Spatial diversity - Readability OR Clarity - Differentiation At the same Continuity inside and out - Local to habitants sit and relax - Semi-open Spatial (according to reasons of climate and Observance Spatial Hierarchy)
Court	<ul style="list-style-type: none"> - Unifying elements of house - home Spaces Connecting - centralist face of conscience world - Symbol and metaphor From paradise - Center and heart of house - An expression of introspection and transparency
Room	<ul style="list-style-type: none"> - Double-door: the room where had the two door towards the yard and was booming In the Qajar era . - Three-door: the room where had the three door towards the yard and use been More for sleep. - Five-door: the room reception of guests (Space most formal of the house)
Hall	<ul style="list-style-type: none"> - Cross-shaped Spatial - alcove (guest room)
Kitchen	<ul style="list-style-type: none"> -Usually square or rectangular -A Place for cooking -near Guest Room
Pool	<ul style="list-style-type: none"> - the most valid element making of Courtyard - motionless and calm water of pool, reflects the sky and the elements around the yard - Referring to the importance and centrality of water in the world - As a central element is institutor around elements of it. - mirror to portrait and reflection around elements of courtyard

Source: Eklas (1393)

Desirable space is space that Provide people today need by relying on the linkages between the past and the future goals .This desirable is comprehensive achievement that that replaces holistic approach and identity ,Contextualism, based on human and cultural concepts rather than problems caused by attitude body-centered one-dimensional to built environment (Soltani et al.,2012). Attention to the humanitarian needs of the most basic to the most transcendental needs. Check of architectural History shows that the primary objectives of the creation of the built environment, meet the most important human needs which according to him is intrinsic features .These needs are actually quite concepts known to man (Sultani, 2012) that Abraham Maslow's hierarchy of human needs mentioned it as basic needs (Eini, 2011). According to Maslow's hierarchy of human needs This most basic needs of those who have a physiological basis, to the needs of human transcendental, all are common features of human and must put them in as natural concepts (Soltani et al.,2012). Iranian traditional architectural space is in first step to respond to fundamental human needs that these concepts are obvious in the architecture, such as shelter, the harmony with the climate and the environment context and etc. But since the architecture or the whole built environment is the external representation of human life, hence he needs, influenced by the ideas and beliefs He first stage and corresponding behaviors With his thought the next step (Iraqi, 1991). Concepts such as hierarchy, public and private, personal space and privacy etc, that has caused the formation of the Iranian traditional architecture. As (Rappaport, 1969) Said is effective five main aspects of culture such as how to conduct the hous, Family structure, gender roles, attitudes to privacy, the process of social relations (Eini, 2011, p. 137). That all these concepts together, can be seen in Iranian architecture. Chart 1 show the architectural features in brief:

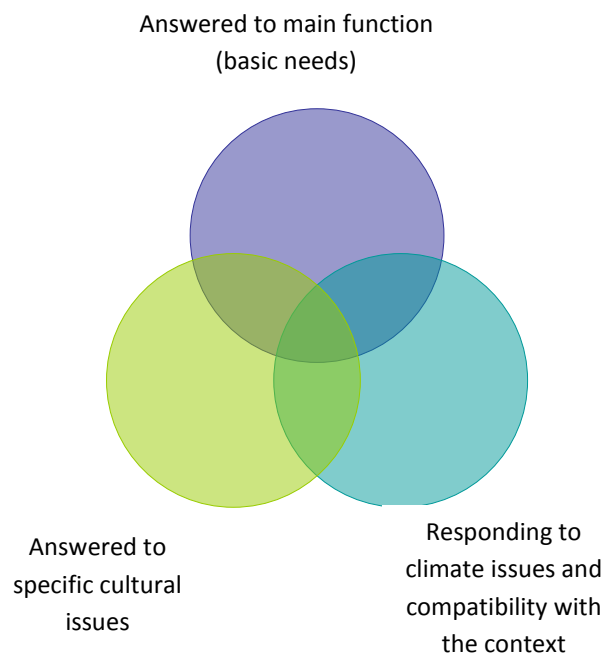


Chart 1: Iranian architectural features. Source: authors



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The Iranian house not only responds to basic human needs according to the pyramid of human needs (Maslow, 1919) and responds to issues in nature but also goes ahead and on the same line without damage to supply basic needs, it has answered the needs of human transcendental in terms of concepts such as introspection, public classified and private sector, Privacy and... which are the architectural concepts and features: such as Boroujerdi House of Kashan which also responding to basic needs and harmony with nature, responded great needs of individuals, including hierarchy, introspection, of privacy, etc., as well as respond to other needs. In regulation of Iranian houses spaces, Is intended to create the conditions for improving their mental states, in addition to addressing the needs of individual performance (Sadeghi Pay-2011). In Iranian house is exhibited coordination between the elements of space the suitable place them by using patterns and geometric forms and create a hierarchy of elements, discipline and unity.

More experts have spoken about the principles of Iranian architecture which is observed in the space of the central courtyard houses, such as: the necessity of separate the public and private arena, houses privacy, ensure confidentiality, provide security, flexibility in space for different uses, creating a natural environment, etc., that originate from different cultural criteria, climate, etc. These principles define the physical relationship and meaning of space in the houses towards each other that is introduced after the identification and evaluation of Iranian houses and its components principles that is realized in this architecture. The following is addressed to the benefit of Iranian architecture in response to human needs:

1-6- Physical comfort (control of climate components)

The geography of the Iranian plateau and the general characteristics of the Iran climate has caused that most of the settlements in this country Placed in hot and dry desert areas or cold mountain, and in this Conditions the most important criterion for the physical comfort of the house is protect from heat and cold as well as protect it from the storm, accordingly, the Inside of house are habitable in central courtyard house. As well as myansrahay relatively small and their gardens which are located on the bezel of the building and surrounding streets of it, is a Location for the accumulation and keep the house cool on dry nights this area.

2-6- Physical comfort in the displacement inside house

High temperature difference between night and day on a larger scale, between the warm and cold seasons.is created context for need of person's house to the space Proportionate with any of the different weather conditions. First, the thick walls around the house prevented the rapid penetration of of summer heat of the day and the home space stays cool for hours .Night also due to the reason stated, it takes hours to cool inside the house. Spaces such as porch, terrace, and the roofs of houses, quickly cooled and are open to residents. As well as this model makes it possible that there are spaces at the sides' sun and shadow house. Therefore most used spaces the north side in winter and spaces of south side in the summer. The importance of natural phenomena leads to the formation of a migration inside the house particularly heat from the sun in winter for cold as well as temperate and humid air flow in hot and humid areas or in many cases.

3-6- Stability and Strength

Rectangular geometric shapes with orthogonal sides have high rigidity against the incoming forces. Structurally there are thick walls in all four directions at the corners of the courtyard



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are fastening together, it causes the houses that were built in this manner have a high resistance to lateral forces. Therefore, this model has created one of the most resistant for the the structural conditions. In this regard, the complete geometry is original bet for the yard because Iranian classical aesthetics equates full geometry with beauty. Square yard has great importance in Iranian architecture which paid more than any other in architecture of the house. In this space is satisfied a sense of esthetic man (Mansouri, 2009). So Pattern of central courtyard provides the possibility of creating a yard full geometry such as square or rectangle despite heterogeneous forms and non-geometric context of house which is caused by from organic roots of urban spaces and intertwined neighborhoods.

4-6- Safety and security (comfort)

One of the most basic human needs that have long has played a role In the architecture formation especially making house, provide security for the habitants .Attention to meeting those needs in different cultures and civilizations, architecture and urbanism in different species, is affected .Introspection ,create a minimum way for intrusion into the home and the huge walls around the house; including features that central courtyard pattern created in past unsafe conditions for Iranian homes.

Central courtyard Pattern with backs up to the home outside, security and comfort of inhabitants has brought .This pattern also features had a large role in creating peace in the home and the inhabitants of the house protects of physical and psychological commotion of street.

5-6- Naturalism

Naturalism is one of the cultural and normative concepts that have attracted the attention of Iranian architecture. Iranians since ancient times to the make garden in the courtyards and around the building have a particular interest. Iranian house courtyard is Selection symbolic of nature, and water, tree, flower, bird are of landscape components of it. Original bet within the meaning and develop a sense of beauty in courtyard, is organizing courtyard with landscape elements. Accordingly, the Iranian people in their homes are to seek space that provides the background of direct interaction with nature and its elements. In the courtyard pattern this problem is done in various ways, imprimis the central courtyard especially in desert areas such as hedge protect of the chosen elements of nature and moisture derived from them. Secondly, the overwhelming views of the main spaces of the house to nature. Thirdly, there are the elements of nature in the courtyard in such a way that people to access different areas of the house or the garden must Has passed through or the side of the garden or courtyard.

6-6- Space diversity

One of the expectations inhabitants of the home is physical and Space diversity. Given that some of the inhabitants of the house in the past have spent most of their time in the house, existence spatial diversity had been caused their vitality and no depressionhas. The central courtyard pattern causes been space porosity of the house and unlike the bulky mass house, created an acceptable spatial diversity. This diversity that is associated with diversity in form, decorative elements and space, is visible in the spatial format open, half-open, and closed.

7-6- Flexibility (multi-function, large families, etc.)



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communication non-linear space in the central courtyard of the house, provided necessary flexible for different uses without disturbing each other in the spaces. The importance of this problem is when be attention to different uses of traditional house as a place family women's employment, children's play, maintenance of tools and estate, depot of food storage and etc .Another norms that has been created with use this pattern, is large family habitancy, means Multi-family habitancy connected of a clan in a house.

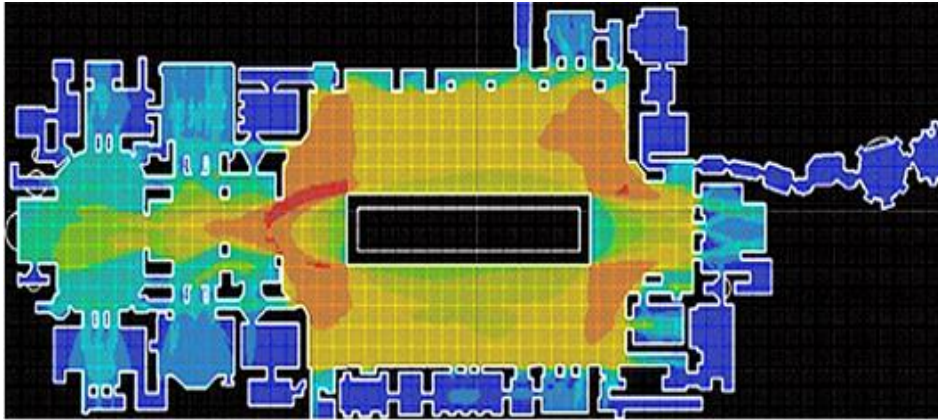
8-6-introspection (privacy, avoid of ostentation and etc)

Reasons such as privacy of house against aliens and observance of privacy has caused that Iranian houses to be introspection. A situation is created in the pattern of central courtyard that first all home spaces such as courtyard are not exposed others. Second, each of the spaces and rooms of the house had an independent path to entry and therefore these spaces do not violate the privacy of each other. Another reason can be cited for introspection of Iranian house, exist, Cultural norms for avoid of ostentation. This state of affairs in the central courtyard pattern format the cause is that beauty Home was only visible for home habitants and outer facade of all homes almost was same together.

9-6- Hierarchy

One of the undeniable traits of Iran's past Effects and buildings such as houses, mosques, schools, etc Can Their introspective Specifications knowed , that deep root have in the foundation and cultural, social, intellectual principles this land. Confidentiality is one of the fundamental foundations that it is of the main reasons for observance the hierarchy at the traditional architecture and utilizes these principles we are witness formation of the values such as safety, peace, privacy in traditional buildings. In the architectural of Iranian houses arenas from each other have been separated clearly and it appearance is in Large-scale or with Creation Interior and exterior parts and multiple courtyard and Separate entrance.

A very important point in relation to the hierarchy in the Iran traditional architecture is spatial continuity. Located forecourt and entrance porch, the entrance, vestibule, corridor and courtyard, and other functional spaces In Communication with courtyard, the sign is of a similar pattern in Iranian houses that it is evokes the principle of hierarchy that position and importance each of the spaces specified in the hierarchy of home and for home habitants and guests that arrive home. This problem is visible as well in visual differences of alcove, five-door hall, and three-door room in around the courtyard. That problem is obvious fully in Boroujerdi House in Kashan. And Figure 4, that shows the output result of the plan assessment Boroujerdi House in Kashan with use of syntax software, is witness this problem that often access and footwork inside the house is possible through the central courtyard. Hierarchy and relationship of spaces with each other specified with use of syntax software (Figure 4).



**Figure 4. The spatial relationships prevailing in the plan Boroujerdi House in Kashan
(Output of syntax software)**

7-Conclusion

Iranian traditional architecture is a clear example of Crystallization Iranian culture and civilization that have shaped in the format of the making of buildings and valuable Effects of architecture and was shown and Shaped to Iranian identity. in accomplished research it was found that part of the reason the formation of Iranian architecture, geographic and climatic requirements are, The other part of requirements arising Been from construction techniques And an important part of Cases consist also human Specifications and cultural norms of society. Certainly the creation of such architecture is not the result of thought and action of an individual or a group of architects, But to create a comprehensive system of human civilization and collective wisdom has been that in a process of trial and error, gradually obtained.

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