

The Role of Natural Environment in Creating Sense of Place in the urban Resident

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Abstract | Courtyards as original spaces in traditional houses, create a sense of place for the residents; these interstitial spaces, had a significant role in everyday activities and made the human-environment bonding possible in the traditional housing(whether between the buildings in the residential complex or between the internal space and the path or surrounding buildings). But in contemporary buildings as a result of dense population and reduction of land capitation, this vital element disappeared, and the form of everyday activities of this functional space changed for other functions with the least spatial capitation; as a result, the human-environment bonding has also changed. However, due to the growing and inevitable need to construct apartments and residential complexes in contemporary societies, the purpose of this article is finding the lost human-environment bonding, and replacing the traditional courtyards with appropriate alternative functional and behavioral elements in the contemporary housing. The theory of the research based on the dialectic of indoor and outdoor spaces in traditional Iranian courtyards, relies on sense of place as the causes for resident's satisfaction and the qualitative factor for planning future housing.

Keywords | Sense of Place, Human-Environment Bonding, Courtyards, Dialectic of Indoor and Outdoor.

Introduction | Based on related references sense of belonging to place can cause into satisfaction from place. These senses are connected to some other concepts such as place meaning, and place meaning attaches to the interactive processes of individual's social involvement and physical settings, which are of influential factors in satisfaction from a place. In some references the social construction of place meaning is emphasized; which connects to specific experiences shared with family and close friends (Kyle & Chick, 2007); as in primitive communities for every human being this sense results in dependence to places (Kyle et al., 2004). Research on the concept of sense of place in the existence of modern life features prove that this factor as a related concept to place attachment may content in the experience of the presence in place; which confirms sense of self in place. (Shape1)

In contemporary houses, population density, changes in land capitation, spatial and constructional relationships, and changes in daily activities and lifestyle led to changes in morphology, and meaning of housing. Contemporary houses are mostly planned for apartments and residential complexes; modern life requirements have led designers to physically or semantically omit some social housing elements such as courtyards (Shape 2). However traditional people lived in a possessed in common house and had a strong sense of community, so the spatial conformation of the house increased the sense of belonging to place; this issue created sense of place through social intercommunications. But today changes in the form of a human-environment relationship caused into lack of sense of belonging to place, changes in spatial conformation, incompatibility for needs, repetition and lack of memorable events, destruction of authenticity in space; and as a result, resulted in some forms of ecological and green architecture; the urban courtyards have replaced the traditional yards to fill the gap.

Through the columns of this research, the authors look forward to derive the communicational and behavioral pattern of courtyards in the traditional houses, to achieve a logical design pattern, for the contemporary and future housing. In this way, authors will always consider the importance of modern life needs and essentials. We could not omit apartments and residential complexes, but how it is possible to restore the lost sense of belonging for residents, neighborhoods, and houses. As in available resources mostly the urban life and the role of the urban yards on the sense of belonging to the urban environment have been studied, so, this article studies housing units as the ultimate place for a human life on earth.

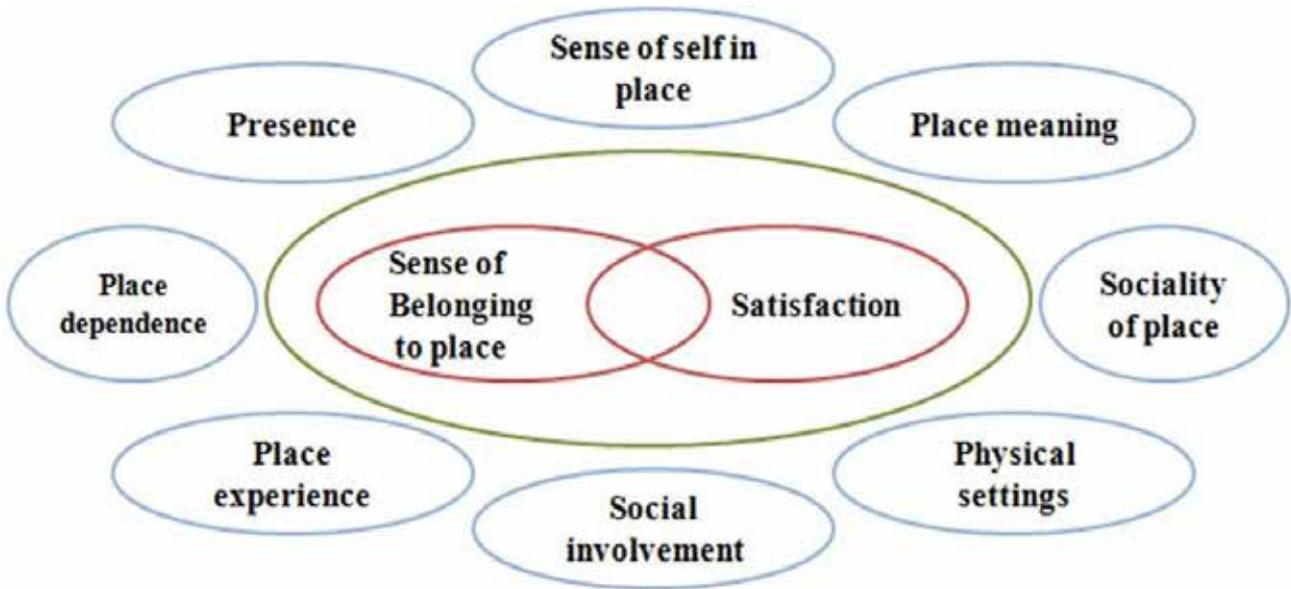
Problem Statement

The rapid process of civilization in underdevelopment countries, especially after world war II and relative

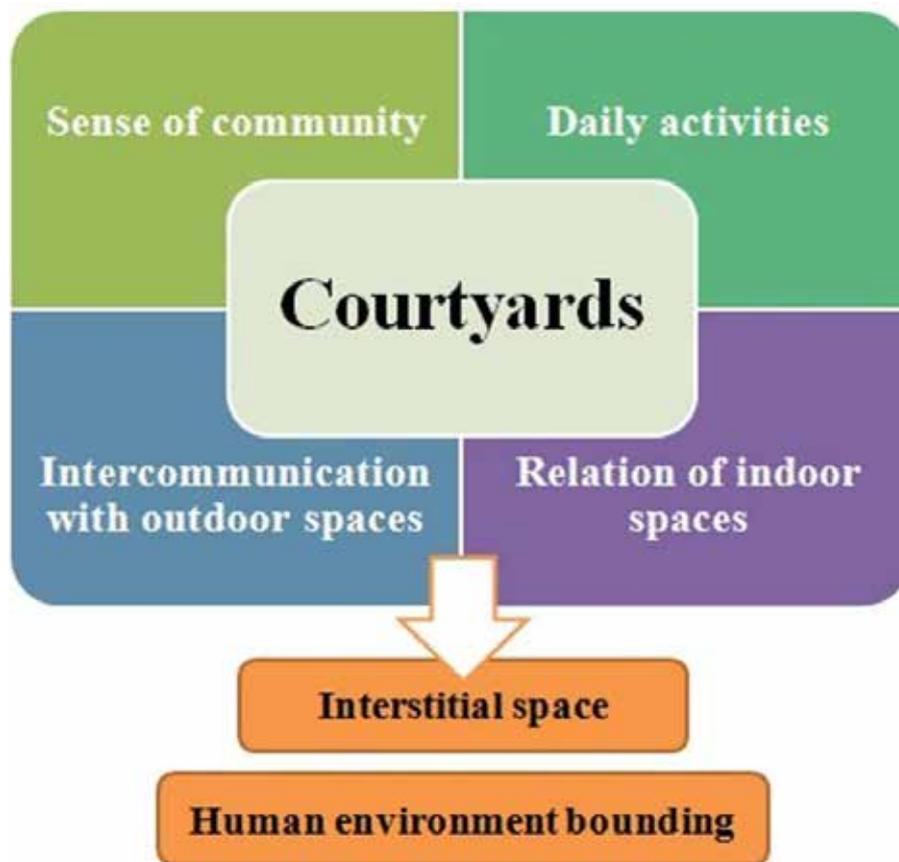
stability, have brought complex social, economic and political issues. In between harmony and congruency between supply and demand (Ebrahimi, Heidarkhani & Firouzabadi 2012), everyday social interaction, public ritual events and social networks, influence the meanings recreationists associate with place along with their attachments to the social landscapes (kyle, 2004). The community tries to make social relations to remain connected to the place. But the buildings and institutions of the city are not merely static entities or inert objects; or even simply structural codes, but are signs that live objectively in the transactions people have with them. They signify history, the relationships, current practices and goals; communicate a sense of place and participation; they work with words, and not with numbers. They are qualitative features. So the greater the number of domains of space the deeper the roots are likely to be in the place (Mazumdar et. al, 2000).

To create sense of place in the traditional urban sites, pleasant places which could easily provide the communication between human and environment were supported. But in contemporary urban context the configuration of the neighborhood and residential units is only based on economic efficiency of land use and fund, or according to path orientation. These row houses are designed based on the master plan criteria with limited forms and patterns. As a result, in contemporary cities separation of residential units only concludes physical and economic dimensions, and ignores the meaningfulness of the site. Indeed unique features which let us distinguish the houses, or the neighborhood from others do not exist. In other words, because of reputation and lack of indicator signs in contemporary contexts, modern human being feels somehow bored and thankless to place.

Social housing is units with the area of 50 to 70 meters square, and constructed massively for low-income households. This procedure has begun from 1373 to 1377 helical in Iran; which was mostly done with the private sector. This led to rapid economic and social evolutions and changes in contextual and social texture, the tendency to consumption, prosperity and any form of manifestations of development. Social, economic and cultural variants had a significant role in this way (Ebrahimi, Heidarkhani & Firouzabadi 2012); in other words the built environments are increasingly interchangeable and thus less "meaningful" today. But in the traditional sites, however, the whole neighborhood and buildings seemed similar, but they deferred in elements and indicators; that way, minimum changes in shape, form, proportions, scale, colors, materials, the type of human-environment bonding, and details made a fundamental differentiation in the traditional buildings. But in recent decades due to changes in the needs of



Shape 1: Different Aspects of Sense of Place. Source: authors.



Shape 2: Different Functions of Courtyards. Source: authors.

contemporary man and as a result of cultural changes, the type and way of the communication between human and place have changed (Shape 3).

Methodology

In this article research approach is, "phenomenological cognition", "object handling method", "descriptive method," with the use of data gathering tool is "library studies", "Photo-elicitation techniques", "documental method," and related documents from "web-based data gathering". Authors look forward to achieving the communicational and behavioral pattern of courtyards in the traditional vs. contemporary houses, and then throughout an analytical deduction method, we could find a logical design semantic pattern for traditional courtyards to be useful for planning and designing of future housing. In this regard, the importance of essentials and needs of modern life is always brought into mind.

Literature Review

The phenomenological approach can create meaningful environments and empower "sense of place", "spirit of place" and "meaning of place" which are basic factors for shaping the place. Place is a space that makes humankind aware of themselves (consciousness) considering typology and morphology of place. In this regard, Schulz emphasizes on the relation between a concept of place and mental image. In his point of view typology of place is created via four driving factors: "spiritual states", "perception and comprehension", "conversation", and "being with others". Topology emphasizes on existence with others or independently, or with a human artifacts. In morphology, space factors consist of the dialectic of indoor and outdoor space, centralization and spatial enclosure, boundaries and spatial barrier, and Character factors conclude perception and navigation (Pourmand, 2010).

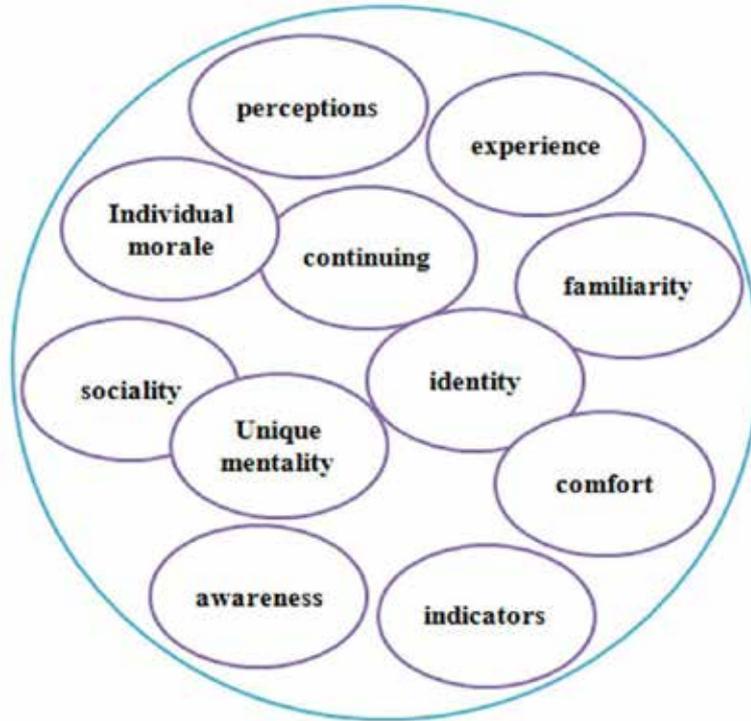
Heidegger in the book "residence, building, thinking", mentions on the relationship between "thing's understanding" and "settlement" in getting an identity. Under the influence of Heidegger, Nurnberg Schultz knows authentication as openness and being open to the characteristics of the environment which is called "the spirit of place". He Mentions on some physical characteristics such as perception and sense of place, the extent of place, the degree of enclosure, conflict, scale, and color, odors and visual diversity (Ibid);(Shape 4) Lynch groups city elements in characters of the way, loop, edge, sign (or indicator) which are influential in memorable places, give an identity and make visual discipline.

The phenomenon of place attachment is an extremely prevalent one in that all face-to-face interaction spaces. World becomes increasingly "placeless" (Kunstler, 1993; Relph, 1976), if there is Non-face-to-face interactions, the

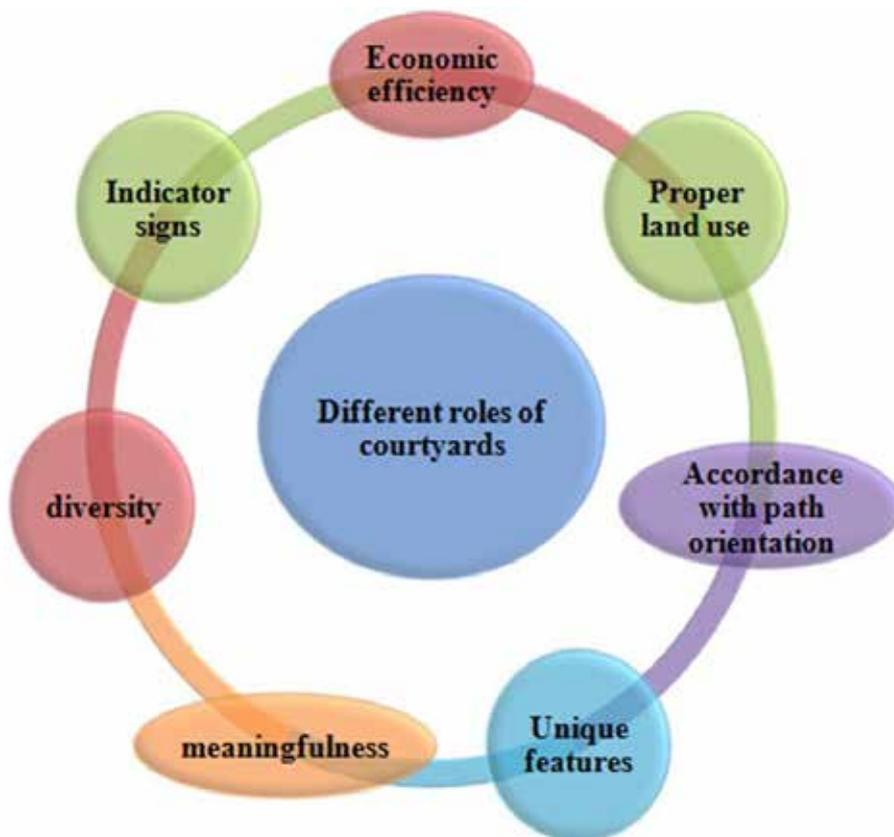
attachment is based on the relationship between events in spaces, and the duration of living. Active spaces become places. As a result, socialization is the main factor for the promotion of space into place (Ibid). A human perceptions of spatial locations, shapes the role of such perceptions in interaction (Milligan, 1998).

The concept of place could be reviewed from physical and semantic dimensions. Physically place means room and a part of space. But the meaning of place is defined by creating pause points and events in the space which are the result, of meaningful memories caused by living experience. In this definition, place is an agreement between two persons or societies that all of its members are in interaction with each other and therefore experience a shared event. This event creates a lasting image in mind; this memory is associated with the sense of the presence in place, which is called sense of belonging to place, or sense of place. Sense of place is a dynamic process and a rooted concept. In this definition, place is physically stable, but the sense of self in place is changeable. Place identity and place dependence each have different psychological properties. Place identity (Kyle & Chick, 2007) uses the term "sense of place" to describe the collection of meanings informants associated with in different spatial contexts as Hay's (1998) showed that sense of place is a more inclusive term than place attachment and other terms (e.g. place identity, place dependence); it reflects more specific associations with place and show the importance of community and ancestral ties to place.

Studies have shown that in the concept of place less a significant was the physical attributes (Ibid). While moderately and positively correlated, examine different sources of meaning places are more than geographic settings with definitive physical and textual characteristics; they are fluid, changeable, and dynamic (Ibid). "sense of place" (Hay, 1998), "place an identity" (Kyle & Chick, 2007), "place dependence" (Ibid), "rootedness" (Tuan, 1980) and insideness" (Relph, 1976) are different aspect of place attachment. "Place= space + meaning" (Kyle & Chick, 2007); (Relph, 1976: 29). In other words "Places are sensed in setting, landscape, personal experience, care and concern for home and the context of other places". Relph has three broad dimensions of place identity "...the static physical setting, the activities and the meanings. Place entails a continuing relationship: "space becomes place as we get to know it better and endow it with value;" and Place attachment is about the activities afforded by place. Each individual's image of place is unique. Although in any person, depending on the type and level of communication with place (individual's awareness) a special mentality is created; the secret place, the Arcadian place, the ancestral place, the shared place, and the alone place; Spagnolli, Varotto and Mantovani (2003) said, place is "an agenda that



Shape 3: Different Roles of Courtyards in The traditional Housing.
Source: Authors.



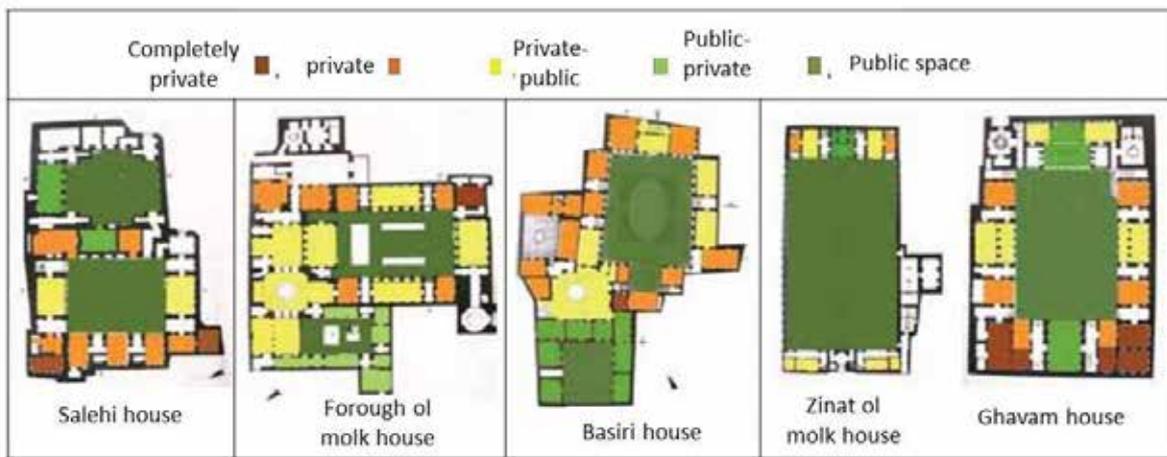
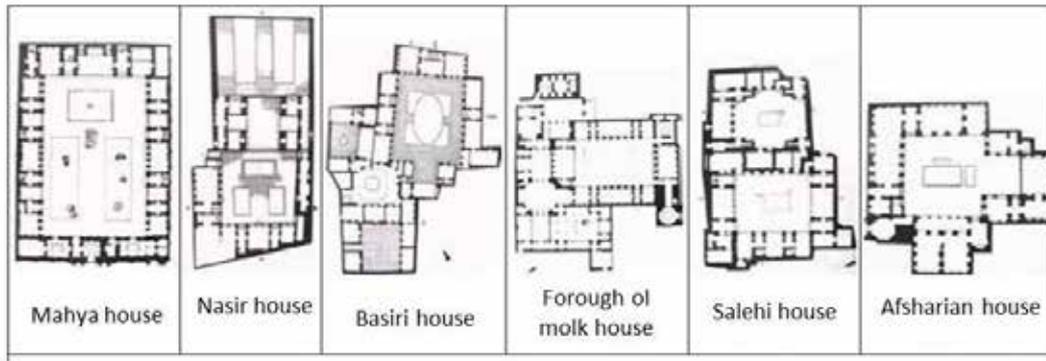
Shape 4: The Process of the Creation of Sense of place.
Source: Authors.

focuses on the nature of the presence, its coordinates and construction” as contrasted to “measuring the degree of the presence felt by users”. Characteristics of place consist of Physical characteristics and visual features such as trees, plants, water and paths. Sensory phenomena, Vision and sound, Meanings and affect: experience, activities, staying more closely and look, social interactions, the presence of unseen people, physical sensations, sitting on the stairs, physical characteristics, meanings and affect, activities, social interaction, associations. Age, length of ownership, participation in recreational activities, days spent on the property, extent of property development, and perceptions of environmental features, all influence on the level of place attachment (Bradley, 2005). So Sense of place is an important motivator for returning residents. Williams and steward suggested that sense of place maybe a content factor in the experience of the presence. Thomas Nagel in View from Nowhere (1986) said the presence and sense of place are first-person perspectives while the models of the presence are objective and Scientific. Courtyards as interstitial spaces in traditional housing have a significant role in creating attachment to place (Pic. 1). Place attachment within three spatial ranges (house, neighborhood, and city) and two dimensions (physical and social) was studied show that neighborhood is the weakest; social attachment is greater than physical the attachment, and the degree of the attachment varies with age and sex. Women show greater place attachment. The attachment to place increases with age, at a younger age the city involves greater attachment, at early ages it is the house, and in the older age group no differences. No

differences were found in the attachment regarding social class. In large cities where distances are greater, activities in the neighborhood assume greater Importance, and in some way, this influences the development of place attachment (Hidalgo & Hernandez, 2001). Climate and architecture of central courtyards, introvert architecture, decorative elements, leading to sustainability in different aspects, environmental, climatic, social, functional, etc. courtyards are the soul and spirit and meaning of architecture, and the building is the physic and body of the traditional architecture (Pic. 2). A comparative study on central courtyards in Yazd and Ardabil as two completely different climatic beds for the traditional architecture, in Iran, have emphasized on the role of geometry, climate response, ratio of yards in comparison to the whole house, ratio of trees and water to yard, optimum use of renewable energy, creating comfort, pleasant space, the least damaging on the surrounding, and natural built environment (Shah Mohammadi & Sharghi, 2015). Courtyards are design models (Soflaei, 2016). In traditional houses, function and physical structure of the building was shaped according to the hidden meaning of architecture, bio-environmental principles, and the type of daily activities or lifestyle of the local man (Sheybani & Porsoleiman Amiri, 2016); (Table 1); (Pic. 3). Iranian house is in contact with Iranian life. The promotion in the level of life in home spaces, results into the concept of vitality (Pic. 4). To create a sense of belonging to a place, sociality of space and presence in place are critical. The role of the culture, activities and a humanistic behavior is inevitable



Pic.1: Ghafouri house, Mashhad. Source: Davarpanah, 2015.



Pic. 2: Shiraz houses. Source: Abdolazadeh & Arjmand, 2012.

in the configuration of the constructional organism of environment and creation of this sense. People in different cultures live in different sensual worlds and experience different environmental qualities (Hall, 1990). So people have behavioral communications in confronting with place, which leads to physical or mental continuity or presence in place. Furthermore, place features link a collection of meanings, codes, signs and concepts, and in this way, give meaning to place. In other words, perceptions, experiences and individual morale are also influential on sense of place. In other words, there is a mutual connection between a human and place called the quality without a name (Alexander, 1979). This quality is emphasized with titles such as sense of continuity, sense of

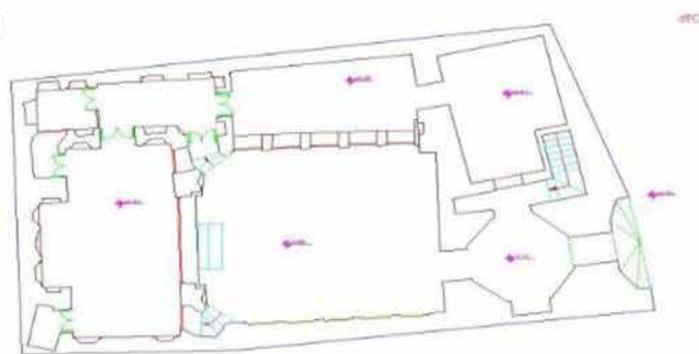
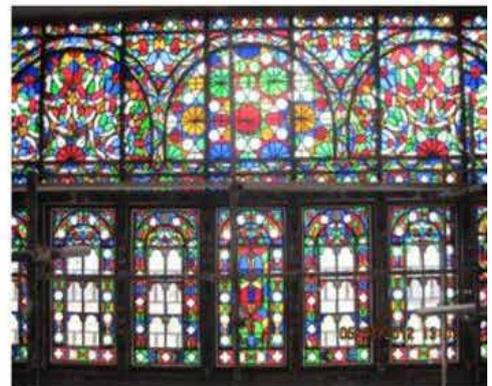
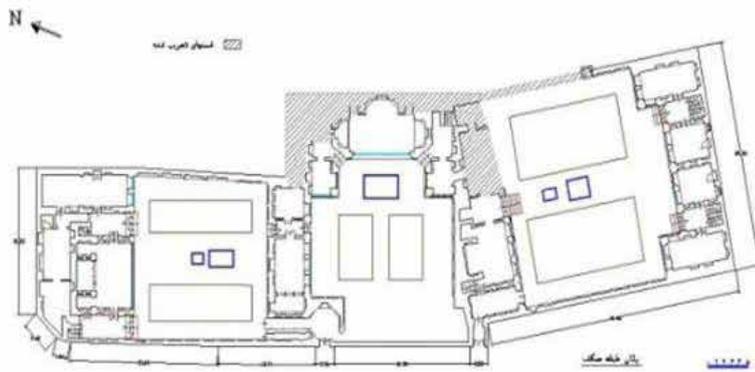
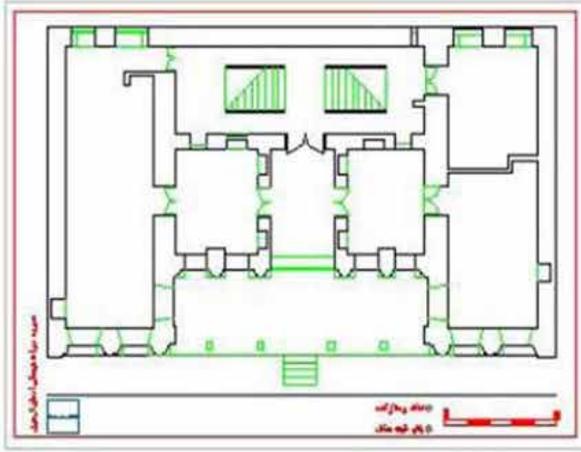
sociality and sense of comfort and familiarity (Heidegger, 2008). Place should include indicators and have an identity; and also produce mentality to be able to bring a sense of place. (Shape 5)

Results and Discussion

Humans inherently have social bonds to place. But in recent decades ignoring qualification and mental needs of the users and only economic attention and emphasis on the physical characteristics of housing, reduced the role of housing as an identifier for human being. However one of the unimportant principles in most of the programs and housing planning has become qualification principles and especially the influence of cultural values which

Table 1. Ways to which vernacular architecture, applies to body, function and meaning of the traditional housing.
Source: Pourssoleiman Amiri, 2012.

Influential factors for housing	meaning	Function	Body	Aspects of vernacular architecture,	How the vernacular architecture, responds
A humanistic factors	Comfort in internal space	Interior space arrangement	Natural and active methods		Meeting comfort needs of the residents
	Responding to special the relationships in the plan	Open, semi-closed, and closed spaces,	Interior yard		
	Attention to health	Simplicity and special transparency in the plan with the least possible subspaces,	Catchment areas out of the residential unit		
	The least space waste	Vulnerability of space	Design of communicational spaces,		
		Light structure	Niche and shelf		
	Confidentiality	Air ventilation and moisture repel	putting gaps between buildings		
		Setting internal lightening Identifying internal spaces, in the elevation	Details of openings		
	Opening to space in the alley for social interactions	Protection against atmospheric factors and moisture repel	Roof projection		Individual and social factors
	A humanistic aspects of the space	Using local knowledge and labor and considering function, activity, the relationships, spaces,, surfaces and capitations	Responding to constructional techniques and using local methods		
Special unity, simplicity and abridgement	Avoid decorating	Repetitive elements in plan and elevation		Home as Self	
Mentioning religion	Ornament	Sedar ornament on wall			
Environmental factors	Mental and physical health of the residents The tendency to communicate with the surrounding environment	Using environmental capabilities such as light, temperature, chill, wind, and air ventilation	Placement and orientation of the building and axial and boundary lines and topography		A phenomenology on the relationship between a human and environment
	Responding to the climate and harmony with the surrounding environment	Space syntax	Using natural energies and local materials		Interaction between a human and environment
		Disposing of ascending moisture	Putting gaps in the building seat		
	A joint for the communication of the internal space with the surrounding environment	Using sun radiation and air ventilation	Multiple openings		
Protection against atmospheric factors		Ivan			



Pic.3: Ardabil houses. Source: Fereidounzadeh, 2014.

resulted in an unidentified architecture (Abdolazadeh & Arjmand, 2012). But in the traditional houses, there was a simultaneous attention and a perfect harmony between the shape and form of the building and lifestyle. It has made the relationship between life and other bold elements in Iranian house, such as nature, social life, the flexibility of spaces, neighborhoods, aesthetics, and the sense of belonging (Ibid).

According to the above, in traditional architecture, the meaning of spaces, was created for comfort and based on mental, individual and social needs of man and the communication between physical body and environment, and landscape as a communicational boundary; but in contemporary urban contexture these values are replaced by economic relations. As a result, to create sense of belonging in urban spaces and contemporary residential complexes, maintaining the culture, considering contemporary lifestyle, and having the socioeconomic conditions and individual and social needs in mind, matters more than ever. Functional features are of the least importance in the evaluation of the satisfaction of residents, which is the result of different approaches of using spaces. On the other hand dimensions of sense of place can discriminate those residents who identify themselves with their place, and prefer to stay; patterns of association between these dimensions differ between adolescent and adult residents. Indicators of dependence, belonging, behavioral commitment and emotional bonding, Link the residents with the community to stay (Pretty, 2003).

As apartments and residential complexes could not be omitted of modern life; considering the importance of modern life needs and essentials has a significant role in future housing planning. Open spaces, between the residential buildings are a bed for the linkage of residents and nature (Behzadfar & Ghazizadeh, 2010). In this regard,

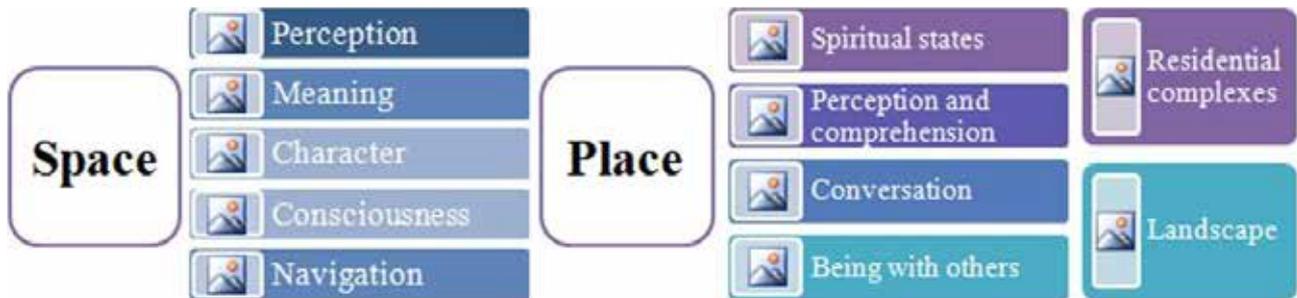
courtyards as original interstitial spaces, in the traditional houses, had a significant role in everyday activities of the traditional houses. In other words, the human-environment bonding, whether between the buildings in the residential complex or between the internal spaces and the path or surrounding buildings, becomes possible in the traditional housing via courtyards. But in contemporary buildings as a result of dense population and reduction of land capitation, this vital element disappeared. Today most of the urban landscape concludes the urban yards; and the form of everyday activities of this functional space changed for other functions in different spaces, with the least spatial capitation; as a result, the human-environment bonding has also changed.

Through the columns of this article and based on analytical approach, the authors came to conclusion that courtyards, because of containing decorative architectural elements, being filled with order and harmony, using colors, odors, natural elements (water, soil and trees), memorable events, social characteristics, being introvert in form and function but extrovert in meaning and concept, and courtyards as microclimate modifiers which take this role through orientation, extension, rotation angle, dimension, energy efficiency, and proportion of enclosed and open spaces, as well as physical body (walls, openings), are valuable features in designing and constructing contemporary residential buildings. Courtyards can result in a logical relationship between human and surrounding environment; because they create a sense of place and sense of belonging in any climatic region, activities in urban parks have limitations compared to types of activities that could be done in courtyards of traditional houses, and level of socialization have decreased in urban yards and parks in comparison to traditional courtyards. In the end, in any urban and housing planning for our cities it's necessary to consider



Pic.4: A Contemporary Villa House, Babol.
Photo: Zahra Poursoleiman Amiri, 2017.

the needs and essentials of contemporary human, besides maintaining semantic features of traditional housing in future housing program.



Shape5: The Paradigm of Sense of Place. Source: authors.

Conclusion | In the traditional houses, some functional and physical elements such as courtyards had a significant role in creating a sense of place for residents. These vital elements also resulted in a sense of belonging through daily activities, intercommunication with outdoor space, and providing the relation between indoor spaces. Generally courtyards, prepared the human-environment bonding, between buildings and the surrounding spaces. The relationship with nature and taking advantage of natural elements, in-house spaces, being in harmony with the special configuration of the traditional houses, which emphasizes on the Iranian life in the past, the existence of a variety of spaces, which was flexible, paying attention to aesthetics and beauty in the whole and in elements of the house, having proportional spaces which were shaped based on social and group lifestyle, and providing privacy for the residents. One of the special features of the Iranian life is being in contact with nature (Abdolazadeh & Arjmand, 2012). These features improved the dialectic of indoor and outdoor space.

In the traditional houses, the human-environment bonding was somehow that any individual could continue living for a long time without sense of boredom in place. Seasonal changes, plants and animals, air ventilation, circulation of odors, colors, lights, and communicating with outdoor space through openings; the existence of all these factors besides each other created sense of place. In this way, it is possible that

the future housing planning, be a contexture with the different structure, finally the units make a combination with different locative capacities, appropriate physical form, and based on the a humanistic and environmental needs. To achieving this goal, it is essential to mark the physical body of the buildings according to three basic factors which create sense of place in the neighborhoods and residential units; these three factors are as follows:

- Creating and flowing of the human-environment bonding, which is obtainable via appropriate design methods and constructional techniques for architectural details, besides considering the contexture as the bed for the configuration of a human society.
- Living experience and the presence in the space, daily activities and social events occurring in place; so it is in direct relation with social memories of place and social activities influence on it.
- Designers should shape the space according to the a conceptual sense of the users, in this way, available instructions and patterns might seem one-dimensional, merely physical, have lack of attention to senses and meanings, and do not be able to apply contemporary man needs, so they are needed to change. Meanwhile if an appropriate subjective and semantic communication is not created between a human and place, so the process of meaningfulness is not possible.

Acknowledgements

Special thanks are extended to Zohreh Keshavarz Khamseh and Somaye Rahimi for their assistance throughout the conduct of this research. The author also thanks Ali Khosh Mehri and Elham Reihani for being generous in data exchange.

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