The Relationship between the Enclosed Space and the Sense of Territory in Residential Neighborhoods
(Case Study: Comparison between Haft-Hoz and Shahrake-Gharb in Tehran)

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ABSTRACT:

Organization of living environment is possible through a clear definition of private and public arenas and determination of a spatial hierarchy. Such defined arenas increase the sense of belonging to the environment which personalizes residential environments. Enclosure is among the quantities that play a significant role in defining the spaces. In fact, enclosure is the factor that defines a space as a ground for occurrence of other events. Enclosure is an individual subjective ground to define the space and the primary factor in conversion of space into place. One of the basic functions of a house is to determine a territory. This paper considers the concept of territory as an effective factor on the quality of the relationship between the human and his residential environment and investigates the effect of enclosure on this territory. Two residential areas including a part of Haft-Hoz neighborhood and Shahrak-e Gharb (West Town) were selected as the sample of the test. The effects of enclosure factor on the concept of territory were analyzed in common residential complexes. A qualitative research method was applied and questionnaire was used as the scientific method. According to the belief that the relationship between human and the environment depends on many different factors, this paper investigates and analyzes the concept of territory and spatial enclosure as one of the effective factors on the quality of the relationship between human and residential environment in the mentioned neighborhoods.

Keywords: Sense of Territory, Enclosed Space, Residential Neighborhoods, Iran

INTRODUCTION

Paying attention to the basic needs of citizens in urban areas and resolving urban problems and dilemmas in order to decrease abnormality and increase security in a residential environment, is now among the issues considered managers, planners and urban designers; and application of sociologic strategies on issues of architecture and design has also been always among the most important. According to interactive attitudes in psychology schools, Humans establish a relationship with their environment and manipulate it as well as being affected by it. Focusing on the spatial needs of humanity in his living environment, scholars have identified several important factors including spatial security, social relationships, legibility, privacy, human's reverence and identity. Most of these needs can only be satisfied through area classification in the living environment. Area classification in residential environments requires a spatial, performance and social hierarchy which cannot be separated from the concept of territory. All of the factors related to the territory and its surveillance are very important for the comfort of individuals and households. Preserving and defending the territory of a house and family and the intervention and influence of environment on social behaviors and interactions should be accurately controlled and investigated, in order to provide a suitable level of safety and satisfaction in human's life. On the other hand, human's demand for a house goes beyond his primary need to have a shelter. Because of focusing on economic and demographic attitudes and neglecting other needs of humans, the desirable quality is not provided in living environments. Investigation of the territory of family in residential neighborhoods and towns indicates that supervision of the territory of residential houses by the individuals significantly helps them to increase the

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security and efficiency of private areas for families and provides desirable privacy and comfort for individuals. Therefore, neglecting the importance of family or individual territory in architecture and urban design can cause an environmental anarchy.

Thus, it can be stated that the

territory has a fundamental role in human's life and makes him able to organize his environment and give it an individual or collective identity. Territoriality and the possibility of changing or personalizing the environment have a significant effect on developing a sense of identity (Roberts & Russell, 2002).

Is the enclosure solely able to encourage the sense of territory among the individuals?

How the characteristics of open and confined spaces affect the subjective territory of individuals?

Literature Review

When a complex is being designed with no specific residents in the future, investigation of populations with similar cultural characteristics or life style usually determines the needs of these future residents. Accordance and coordination between human factors and physical pattern can result in the design of residential environments in which behaviors are in accordance with the manners of collective life that creates the residential tradition of its residents (Rapoport, 1977;1981).

One of the objectives of designers and architects is to create a proper relationship between humans and their physical environment. In order to meet this objective, the space creatures should have an accurate understanding of human behavior in different environments which enables them to strengthen the link between human and the space that surrounds him (Waxman, 2004).

The investigations of historians and sociologists also indicates that territorial behavior or territoriality and its consequences such as possession and active defense have always been observed among different human groups along the history. Although territorial behavior is a complicated procedure which changes depending on different situation and occasions along the time, it has caused people to choose a specific sign or place as their unique identity in the world. This sign and place are observed as personal and social identity and it creates a sense of possession and defense (Lawson, 2007). The emergence of this concept can be searched in sociological studies of civil life in 1920s. When the interviewers used to investigate the performance of social groups, they continually encountered the territories separated by places in order to prevent other groups from entering their territory (Altman, 1975). Sometimes, these territories had racial theme. Others belonged to a particular social class. Some of these territories were marked and others were only recognized through territorial behavior. People's perception of the type of this space is strongly affected by the way in which its physical environment is designed. These perceptions are different from culture to culture (Lang, 1987). Territory is not only a spatial concept for humans, but also a

product of subjective structures and sketches (Lynch, 1987).

The Concept of Territory

Linguistically, territory refers to an arena of authority, occupation and ownership. According to the history, it is also indicated that from the early residence of human being and the formation of primitive shelters, deliberate construction of environment had caused a purposeful marking which showed the areas under one's possession. This marking is even observable in the Petroglyphs of caves that belong to 30000 years ago (Rapoport, 1986). For the first time the term of the territory was explained by Oliver Howard and Ardrey demonstrated Necessity deterritorialization. Minority animals pay attention to establishing a territory. Ethology in animals means Social and geography range Monitor and control permanently. (Ardrey, 1967)

Territory is not merely a spatial concept; it is also a social phenomenon. In fact, the territory can be considered as the position and location of a community within the space (Lawson, 2007). Having an obvious and specific boundary or spatial territory to live in, is one of the inborn characteristics of human beings. Spatial territory is usually recognizable in two private and public forms. Obviously private space defines a private boundary or private territory for one or several individuals and public space belongs to everyone; but the controversy is about the distance between these two spaces (Tavassoli, 1997). Altman considers the spatial territory as an objective to provide privacy, while according to Pastalan, territory is a limited space used and defended by individuals and groups as their private area (Lang, 1987). According to Guffman, territory is an area which is specified and defined based on its ownership and exclusive use (Altman, 1975) it should be mentioned that, even many social behaviors have some territorial aspects which should be defined spatially and changed depending on the place. In fact, territory is an indicator to pass through a simple space which can be considered as a backup strategy for the main life requirements such as identity, motivation and security. According to the investigations of experts such as Ardrey, territoriality is among the basic needs of most creatures (Ardrey, 1967; Lawson, 2007).

Altman provides a general categorization of territory which respectively includes:

Primary territory: the primary territories are under exclusive ownership and use of a particular person or group on which one has a strong control. The scope of this group includes wives and husbands, individuals or families. The sense of territory in this type is permanent and it belongs to the group.

Secondary territory: territories owned and used by an individual or group but it has public quality, to which others have access as well. The ownership in this type is defined through secondary units in which the individual is considered as a part of a group. The ownership of this type of territory is long term.

Public territory: this territory has a temporary scope and it is accessible almost by everyone. As long as some social norms are regarded, this territory can be used by everyone. The

ownership of this type is generalized to public units which includes more spreader and wider groups. The possession of this type of territory is short term (Altman, 1975).

Territory in Residential Complexes

Living in a pre-designed residential complexes can be considered as the most significant evolutions in civilization process. Although it seems simple and obvious to pass through a stage in which each building was designed according to the needs of a particular family and reach a point where houses are belted in line with plans that suites a public condition, it is indeed a fundamental evolution. The results of such planning include a wide range varying from residential complexes with low density to those with high density. In this text, residential complex refers to sets of buildings which are planned, designed and performed simultaneously under different titles. The scale of such complexes usually ranges from several residential units to tall buildings and even large complexes which has been formed as a part of the city. With the increase in occupancy rate, the quantity of private open space usually decreases per unit and the physical adjacency increase in people's life. As a result, privacy and territory has to be well-defined in design of residential areas, since unwanted social conflicts can increase among their residents as a result of the disambiguation caused by a weak definition of private and semi-private territory. On the other hand, a clear definition of frontage and territory can increase the sense of identity, privacy and security among people and reduces social conflicts and the issues of the vicinity. Therefore, separating and distinguishing between private and public areas is among the most important behavioral features to provide privacy and security, but in the determination of territories, the semi private territories are usually disambiguate and weakly controlled (Nariqomi, 2010). One of the main issues of modern residential complexes is the sudden communication of the residents of their private space into the space that is completely public (Tavassoli, 1990). The structure of the environment in different cultures causes a variation between the boundaries of individual territory which can also be called a native area.

In his book "the Great Good Place", Oldenburg writes that "cafés, coffee shops, book store, bars, beauty salons and other hangouts at the heart of a community issues the central theory that in order to have an easy and satisfactory daily life, it is necessary to find a balance between experiential, residential, work and social territories. Thorough explanation of a third space within the urban public spaces and the role it plays in approximating first and second (House and work) territories, he underlines it as the main parameter in identification of a city. Oldenburg discusses that since the expectations from family and work go beyond their capacity, individuals need to satisfy them, which can be done by social territories (Carmona et al., 2003).

In order to meet a plan and a successful design in residential environments, it is necessary to understand how these spaces work, what characteristics they have and which elements can guarantee their success. The sense of territory and security in each of the urban classes is among the important matters. In each of the urban areas, there are other elements such as culture, place identity, sense of belonging, security and privacy that also matters for their users.

Territory of Different Areas in Urban Space

Houses with a single household usually provide a clear hierarchy of territories, from public to private or according to Al.Sharqawi, from central to peripheral (Ansari et al., 2010). Rapoport mentions five indicators as the characteristics of behavioral (praxeological) space: the scope of house, main active areas, territory, temporary territory and private space (Rapoport, 1977). Spreiregen considers the urban space as a place for concentration of activities; he also believes that the rigidity and formality of urban spaces can be reduced through developing open areas as a complementary factor. He mentions walking as an index and suitable scale in urban design which provides the widest contact with a space which is necessary for all human posts (Spreiregen, 1965).

Three main scales are recognizable in categorization of effective human-environmental factors in physical design of complexes:

First, the external link with the adjacent environment; the most important issue is to create a link between them and the existing physical texture and develop open areas;

Second, internal relation of complexes and the communications outside the units; establishing and keeping balance between privacy and social interaction, how to give a sense of security, orientation and pedestrian access, vehicular access and considering suitable stations are among the important matters of design in this scale.

Third, residential units; in this scale, the relations and proportions of internal spaces of the house and their coordination with the culture and tradition of residents are considered in the design (Eynifar, 2000).

The difference in form, scale, size, structure and location of the houses is among the outstanding features of residential complexes. The issue of designing and building residential towns is widely discussed; therefore, this chapter proceeds to describe the most important arenas and different aspects of urban and residential spaces (neighborhood, street network, threshold, and residential space), since the determining their location and separating each of them from the others has a significant role in the creation of a clear hierarchy in family's privacy and territory.

Neighborhood

Neighborhood can create a social and physical existence. Because, it has both a social structure and a physical pattern which help to identify and signify urban environments. According to Rapaport, neighborhoods are places through which residents can define themselves. In this way, the social identity is created for the spatial units of the town (Rapoport, 2002; Campbell et al., 2009). Right now, neighboring units have a significant role in urban design and development in the West.

They are even mentioned as the key urban development, people's participation and identification of urban areas.

Keller (1968) describes the four dominant definitions of neighborhood:

Neighborhood as an environment with a special ecological position in a bigger environment;

Neighborhood as a social symbol;

Neighborhood as an environment with a specific strategic role;

And, neighborhood as an environment with a special atmosphere. All of these definitions are subjective social, spatial schemes. Physical details and official structures of these neighborhoods can be designed externally, but their social structures are formed from inside. Physical districts, location and features of the streets, the way houses and buildings relate to the streets, location and type of service places are all among the elements that can be designed in order to provide a live and a livable environment to answer the needs of the residents. Local social structures are also effective in the quality of forming and developing such environments (Lang, 2005). Neighborhood-oriented approach can promote the feeling of security and show the necessity of explanation of spatial structure and boundaries of neighborhoods in urban societies, therefore, as a social unit, neighborhood has a significant role in providing security and identity and it makes the individuals feel belonged and secure (Gharayi et al., 2010). The main framework of the neighborhood includes the public space and arena in its own scale. This arena is perceived through an interaction with the private arena, and the contour between these two arenas is a space that creates a hierarchical structure to move from this to that (Habibi, 2003). Lang also believes that public space includes the space between the buildings and even some parts of their internal room (Sultani, 2010). In the past, the hierarchy of the different areas of the city and the neighborhood was properly implemented. Alleys and passages pedestrians have connected residence unit to the roots of the main pedestrian in ancient context which has high efficiency.

These alleys not only are approached to residential zones, but also are reaching to passages pedestrians and residential square tissue.

Also, they are located in appropriate distance to network accesses. (Fig.1)

House

In an urban scale, house can be considered as the smallest component or a cell in the body of the city. House relates the individual to his environment and makes him committed to it. The house has to create a balance between being between others and solitude (Bahraini, 1999). Generally, the difference image of residential units in the West is an important factor in explaining of individual identity and personality. It can be the reason of residents' interest in separated residential units as a tool to express their individual dignity. There are a lot of cultural differences about this matter in different countries. The area that surrounds residential complexes can be soft or hard and even the name of these complexes can affect their identification and identity (Lynch, 1987).

It can also be mentioned that in the East, the house is considered as the main units of urban life. As a symbol of an intensive universe, houses used to form the urban texture. Central yard was one of the main elements of such houses (Ardalan et al., 1973).

Street Network

Street and path network works as a linkage between the element of residential space and urban spaces and locations. Paths are permanent elements which form the general structure of the city. Urban streets play a role in transportation, accessibility and social affairs. The hierarchical system of paths plays the role of transition and accessibility, and determination of the location of territorial boundaries of urban street networks affects their hierarchical territorial behavior and performance. Alleys and streets of a neighborhood basically belong to its residential complexes.

The recent expert, Bill Hillier pays attention to the relationship between spatial situation, movement and analysis of public networks which can lead to results applied for a more suitable design of urban space. According to him, people's presence increases the sense of security in a public space and it provides
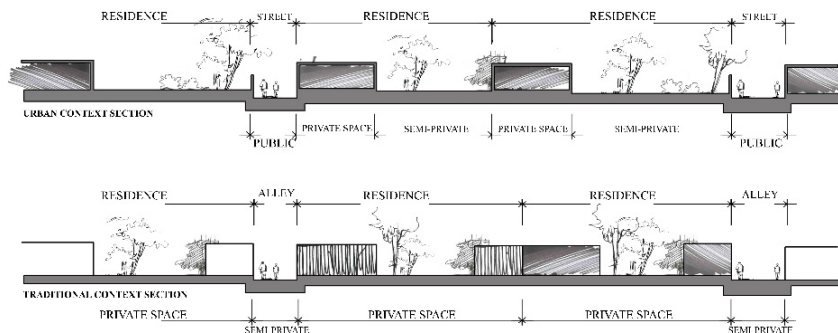

Fig. 1: A section showing the territorial layers in urban and traditional context

the primary tools to secure this space in a natural way. As Hillier mentions, if the design of the neighborhood is ultra-local (i.e. There is no proper unity), the pattern of natural movement breaks down and the space turns to inutility (Hillier, 1996).

Entrances

Entrances have a significant role in determining and separation of territories and they separate the semi-private and public arenas. Entrance of residential units is highly significant whether due to the formal effects of these structures or as one of their descriptive elements. In the introvert eastern architecture, vestibule works as a semi-private-semi-public space which leads to specific directions into two spaces with different qualities (Andaruni, inside and Biruni, outside). Special elements such as corridor (Daln), stairs, passageway (Qolamgardesh), help the vestibule and make this spatial distribution more coherent.

Compared to western houses, in the houses of American Indians, Mexicans and Muslims threshold is located in a further place. The fences of a British house which also form its threshold are placed further than the unconfined lawn in American suburban houses (Rapoport, 1972).

Enclosure

Enclosure refers to limitation of a space within its walls so that one feels to be in a container. The enclosure has several degrees, which are at least derived from tow basic fundamental factors:
Proportion of the height of walls to the floor;
The rate of coherence within the space walls.

In review of the concepts of urban space, enclosure and its related aspects are considered as the most significant factors in physical identification. This identity affects the revision of subjective territories of individuals. D.K. Ching believes that the strongest definition of a space takes part when four vertical surfaces are enclosing a part of it. According to him, these four surfaces can define a visual and spatial area in which a mass is organized and, the surrounding buildings are considered to belong to the internal area and they activate the confined area and make it more dynamic (Ching, 2010).

Finally, Trancik is the pioneer among the others who defines space and anti-space in relation to bulk and mass. In fact legibility of a space is created in contrast with its base, therefore, the mass, space and formation of the type of enclosure affects the visual, territorial, and subjective confinement of individuals (Trancik, 1986).

This is one of the main aspects in distinguishing modern and traditional urban design which is directly affected by the existence or lack of enclosure in urban spaces. In modern urban design, mass is considered as a positive factor and it is located in the space like an abstract subject. Therefore, some formless urban spaces are created with an altered physical identity. Such spaces which often have a wide and inhumane range, lack any sort of enclosure. On the contrary, in traditional urban design, the space is considered as the positive factor, in fact, mass is considered

as a cause of the space. In other words, space is the root and mess is the branch, therefore, urban spaces are organized and defined. The main factor in this idea is the formation of space by the mass. This physical characteristic is identified both in surface and space. Enclosure acts as limits and boundaries of a subject in two dimensions; therefore, the maximum enclosure is achieved in minimum separation. This characteristic defines spatial boundaries in three dimensions and makes it understandable for citizens, so that the feeling of being in a space is induced. In such a space, a strong experience is sensed by the citizen who is able to understand his relation with the environment and its elements and components. The comparative investigation of qualitative and quantitative factors of spatial focus in traditional urban design in Iran and Europe indicates the effect of cultural and climatic factors on the level of enclosed space. In other words, historical background, culture and climate are very effective in the determination of desirable enclosure. Therefore, through reviewing and investigating enclosed space it can be perceived that just like other factors and principle in architecture and urban design, the quality and quantity of this factor should be determined according to climatic and regional assumed and it is not considered as predetermined, fixed and worldwide principle. Mass and space are the two main elements of architecture and their reciprocity is the heart of designing (Bacon, 1974).

According to Canter, there are three components that affect the evaluation of residents about their satisfaction from where they live: the spatial aspect (architecture and urban design), human aspect (such as social relationships and practical aspect (services and facilities) (Canter, 1977). More recent experimental research (Benito, Aiello & Ardeo) added a fourth aspect to Canter's model, which includes basic variables such as life style, population and preservation.

Living in apartments and the small space of living requires the use of public spaces. The complex should not be too big so that the person doesn't feel the sense of possession and familiarity with it; neither should it be too small that can be easily converted to a private yard which can hardly be realized through the facilities today. Modern houses with the existing facilities and conditions cannot be responsive to the needs of traditional people. Establishing a continuous relationship with the nature and expanding a part of indoor activities into the outdoor explains the necessity of paying attention to open areas. On the other hand, it also seems necessary to consider the open space as a place to establish social interactions, which consequently increases people's participation and as a result, the social security and responsibility of the residents to their residence.

As to the contemporary urban design, development of open spaces is seen as one of the vital elements of the city. As an explanation, in addition to finance the light, air and in general city's respiration, the effect of open space on the formation and communication of different regions and perspectives, and performance of urban project is more significant compared to other components and elements. Besides, it is very useful

information of perspective, desirability of activities and spaces, citizens' perception of the city and generally, development of recreational and touristic spaces. Furthermore, in critical situations, open spaces can have many functions such as settlement of mobile therapeutic centers, collection of aids, crisis control and management, and also, temporary residence of earthquake victims, etc.

According to Bishop et al. (2001), vaster open spaces with logical and balanced distribution and suitable accessibility, decrease people's vulnerability to disasters.

The studies performed in different countries indicate that 400 meters is the maximum distance from each house that its residents would traverse to do their regular tasks. Only interested and active individuals would show a tendency to repeat using services in a further distance (Beer & Higgins, 2004).

Hans Paul Bardot believes that there is a relative relationship between the intensity of the mutual relation between public and private spaces on one hand and the identity of residence on the other hand. The narrow space of the residence is the private arena and the public arena surrounds it. The deeper this mutual relation is, the more urban the environment would be. In order to meet this objective, the variety of spaces should be considered in order to create various experiences. On the other hand, it is necessary to be very accurate about the proportion of private, semi-public, and public spaces. The most negative psychological effects on individuals are caused by a lack of optional and non-compulsory contact (between them) or, on the contrary, the frequency of unwanted and inescapable contacts (Grütter, 1987).

MATERIALS AND METHODS

In order to investigate the relationship between the enclosure and the sense of territory in urban spaces and residential complexes, several targeted samples were selected. Considering the spread of such samples, a specific region was surveyed in each phase.

Case Study

Haft-Hoz central and main neighborhood was selected from Narmak Region and from West Town, the Fourth phase was chosen. These regions were selected because of a long history of resistance and their homogeneous residents. Shahrak-e Gharb (West Town) is located in the Northwest of Tehran. In 1961, near the Khordin historical village, this complex was built by American engenders in a modern form which was completely different from the traditional. At that time, a number of experts and technicians who have come to Iran in order to develop scientific and industrial activities, inhabited in this complex, that's why it is known as West Town. Performance of some planes under the title of "capital modernization" in a Second Pahlavi era had a significant role in the formation of this neighborhood. Different urban design, modern towers and luxurious villas that were quickly built in these years, turns West Town into one of the modern urban symbols of Iran. After the victory of the Islamic Revolution and some demographic transitions in Tehran, the population combination of West Town became closer to the texture of other regions in Tehran. The investigated sample was selected from the fourth phase of this complex. Haft-Hoz neighborhood is the central core of Narmak region, the first experience of Persian modern urban design. The building operation of Kalad neighborhood, which was firstly designed in 1950, began in 1959 and finished in 1966. Narmak should be known as the first regions designed with a regular North-South street network and a hierarchy. Daftar station and Nabovvat Square (Haft-Hoz) were the first parts formed in Narmak region. In the first general scheme of Tehran that suggested the access from Resalt path to eastern areas through Shemiran old road, Narmak region was divided into two Northern and Southern parts. As the primary core of the district, the historical-cultural Narmak region is a neighborhood with constant, safe, identified and legible residence which has a suitable and controlled balance and linkage with the whole district and city. Because of having infrastructures, urban facilities, green and open urban spaces, and different public areas, Narmak are considered as a noble, sustainable, live and active environment for its residents with a social-cultural identity.

Sample Evaluation

In this chapter, in order to evaluate the suggested model and aiming to perform a qualitative research, a questionnaire was designed to conduct a survey of the residents of the two neighborhoods. Considering that the objective was to achieve qualitative results, a questionnaire including 20 questions was distributed among 42 residents of Haft-Hoz neighborhood and 52 residents of West Town. The contents of the questionnaire can be divided into three general parts: the first part includes the personal information of the respondents; the second part is related to the boundaries of three foresaid territories, and the third part, confines each of the subjective enclosures (resulted by the suggested model of the research). In order to regularize the statistical population and be certain about the achieved results, the respondents were chosen from all age groups (average age of the respondents was 36.7 in Haft-Hoz and 33.9 in West Town).

Research Hypotheses

How much the increase in the sense of territory is affected by the feeling of enclosure in an environment?

There is a significant relationship between the rate of enclosure sensed by individuals in the neighborhoods and the sense of territory among their residents: H0

There is NO significant relationship between the rate of enclosure sensed by individuals in the neighborhoods and the sense of territory among their residents: H1

The following questions were issued in the questionnaire in line with achieving the research hypothesis. (Table 1)

Table 1. Questions

1. How old are you?
2. What is your gender?
3. What is your marital status?
4. What is the name of your neighborhood?
5. Where do you live? An apartment or a villa?
6. How many years have you been living in this neighborhood?
7. What is the name of your neighborhood?
8. Have your neighborhood got a special feature?
9. According to the seeable view of inside of the residential unit from the outside, how safe do you feel you are?
10. Do you make any change in the spatial structure of the neighborhood?
11. How far do you think you are from the main communicating street?
12. Do you think it is proper (to be far from vehicular communicating arteries)?
13. Where do you spend your leisure time?
14. Are there any special individuals that you meet in these spaces and do you have any special memory with them?
15. How much the people from other neighborhoods use the green spaces of yours?
16. Is there any suitable place for children to play in your neighborhood?
17. How much time do you spend there during a day?
18. Do you make (or like to make) any changes in details of this space in order to use it?
19. How satisfied you are with the size of buildings and spaces and the total area of the neighborhood?
20. How much relief do you feel where you live?

RESULTS AND DISCUSSION

In order to recognize public territories and resident's subjective perception of the neighborhood arena and its features, in the first step they were questioned about local identity (Table1, Table 2 and Table 3). The local identity was at a high level in these two neighborhoods. Nevertheless, some differences were observed as well. The most significant answer had a percent to 57% in Haft-Hoz, while this percent was about 86% in West Town. The rest of the individuals in Haft-Hoz neighborhood had a very wide subjective territory who mentioned the name of Narmak while answering this question, while the subjective territory for the residents of West Town had a specific and a more limited hierarchy, and sub-neighborhoods were perceived stronger in this strict. As to their answer about the special features of the neighborhood, no case was mentioned as a special trade center in West Town, while in Haft-Hoz, Nabovvat Square and its open space was introduced as the main feature of the neighborhood which informs us about the physical and subjective categorization of its residents. As to the questions about the enclosed space, the residents of both towns mentioned that public spaces in Haft-Hoz are confined in a special way; in other words, about the identity of the place and security of its residents, secondary territory and public territory are in a great accordance, while in the evaluation between primary and secondary territories, an overlap is observed between them. Anyhow, in spite of the existence of enclosed space in public territories, an improvement was observed in the effect of primary territory. There were some open, but unconfined spaces in West Town while the public places were generally formed outside the town in recreational and trade complexes. Nevertheless, while investigating the primary and secondary territories of individual in residential units, it is found that dead-end alleys and the streets which are entirely confined by trees, spaces and masses, have a significant role effect on increasing their subjective territory, although the hierarchy of subjective territory among the individuals is not accomplished between the public and secondary territories. In a general division, Access network neighborhoods would be defined as Fig. 2 and Fig.3.
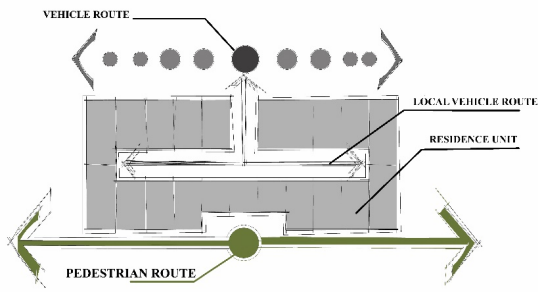
Statistics

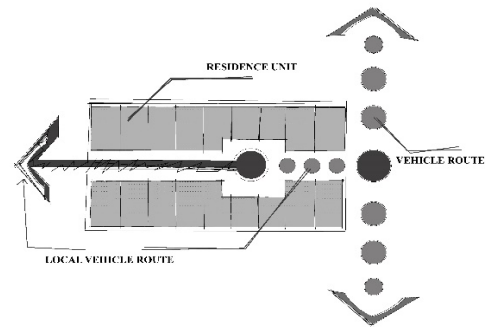Fig. 2:The diagram of the SHAHRAK_E_GHARB (West Town) districts.

Fig. 3:The diagram of the HAFT-HOZ districts.

Table 2. The results of the investigations on the questions related to SHAHRAK-E-GHARB (West Town).

	Q9	Q10	Q11	Q12	Q14	Q15	Q16	Q17	Q18	Q19	Q20
Mean	3.33	2.87	3.31	3.44	2.37	2.75	2.90	2.92	2.75	3.50	3.50
Mode	3	2	3	4	1	3	3	2	2	4	4
Variance	1.087	1.374	.962	1.820	1.570	1.054	.991	1.210	1.250	1.235	1.039
Range	4	4	3	4	3	4	3	2	4	4	4
Sum	173	149	172	179	123	143	151	152	143	182	182

Table 3. The results of the investigations on the questions related to the HAFT-HOZ neighborhood.
Statistics

	Q9	Q10	Q11	Q12	Q14	Q15	Q16	Q17	Q18	Q19	Q20
Mean	3.40	2.19	3.12	3.71	2.86	2.40	3.24	3.07	2.67	3.14	2.90
Median	3.00	2.00	3.00	4.00	3.00	2.00	3.00	3.00	3.00	3.00	3.00
Variance	.539	.548	.254	.502	.272	.491	.283	.897	.911	.516	.674
Range	3	3	2	3	2	3	2	4	3	3	4
Sum	143	92	131	156	120	101	136	129	112	132	122

Afterward, other types of territories and the boundaries between them in these complexes were specified by different questions. As it has been mentioned before, different types of territories are formed according to the rate of being private or public, surveillance, control, etc. the boundary between these territories can be limiting and confining; or, through marking and determination of non-physical private areas, a flexible and soft boundary would be created. Different types of these boundaries are recognizable in both complexes. Considering the developmental hierarchy in West Town, privacy is denoted through the access and the spaces gradually turn into private areas. On the contrary, in Haft-Hoz neighborhood, it is the form of the buildings that sorts the space between them, and in addition to that, delimitation of different territories is controlled through vehicular access.(Fig.4 and Fig.5)

Fig. 4: Hierarchy territory layering from street to the residence districts.SHAHRAK-E-GHARB (West Town).
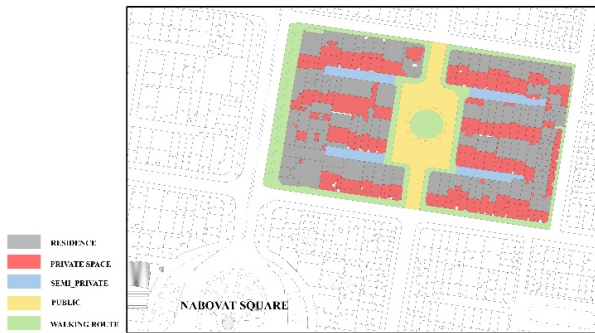
Fig. 5: Hierarchy territory layering from street to the residence districts.HAFT-HOZ.

The comparison of the answers also indicates that territories are more specific in West Town than in Haft-Hoz. (According to the residents) If the yard portal is considered as the boundary of primary (or private) territory in West Town, alleys and U-turns work as secondary or semi-public-semi-private territories and streets belong to the public territory of the neighborhood. As to Haft-Hoz neighborhood, the door of apartments and residential units are considered as the boundary of primary territory and semi-public-semi-private spaces include the corridors, stairs, entrances, and the public spaces within the block and sometimes the whole block. Although some of the residents believed that corridors work like the alleys in other neighborhoods, they have no right even to occupy or manipulate the apartment entrances. Yet in Haft-Hoz, the sense of belonging to public spaces specially Nabovvat square has caused them to be considered as the most essential secondary territories. This factor can be investigated in different territories, according to the duration of being used, the number of utilizations, and finally, the rate of utilization at night and day. In both residential complexes, the interactions that take part in public territory don't go beyond daily activities and gathering in public spaces. Because of the existence of yard element and open and semi-open private spaces, gathering in public space is less frequent in Wes Town than Haft-Hoz. The time people spend in secondary or semi-public-semi-private territory, is longer in Haft-hose which can be caused by the existence of public spaces and the surveillance on the secondary territories. The nightlife goes on at both complexes, mostly in the shopping centers, malls, and public places such as parks and green areas. We proceeded to prove that stronger feeling of enclosed space in residents would lead to an increase in environmental design of the sense of territory; therefore, we investigated the sense of territory in these two neighborhoods. As a result, the scores of the sense of enclosure in Haft-Hoz neighborhood and West Town were

Table 4. Investigation of the sense of territory in both neighborhoods (scored out of 100).

Question	Haft-Hoz Neighborhood		West Town	
	Median	Score	Median	Score
Q9	3.4	68	3.33	66.5
Q10	2.19	43.8	2.87	57.3
Q14	2.86	57.1	2.37	47.3
Q16	3.24	64.7	2.90	58.07
Q17	3.07	61.4	2.92	58.4
Q18	2.67	53.3	2.75	55
Q20	2.90	58	3.5	70
Sum	20.33	406.3	21.61	420.6
Median	2.90	58.04	2.94	60.08

Table 5. Investigation of the rate of enclosure in both neighborhoods (scored out of 100).

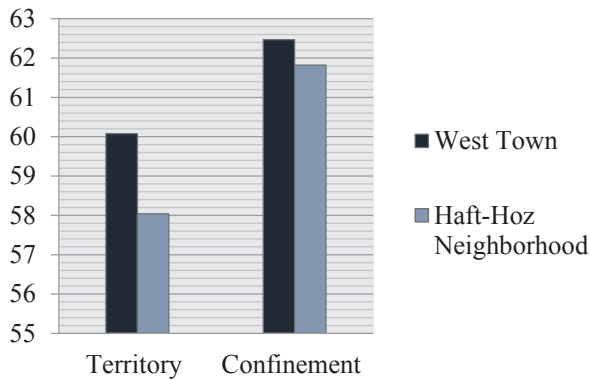| Question	Haft-Hoz Neighborhood		West Town	
	Median	Score	Median	Score
Q11	3.11	62.3	3.31	66.1
Q12	3.71	74.2	3.44	68.8
Q15	2.40	48	2.75	55
Q19	3.14	62.8	3.5	70
Sum	12.36	247.3	13	249.9
Median	3.09	61.82	3.25	62.47

Fig. 6: Investigation of the rate of enclosure and sense of territory in both neighborhoods.

obtained out of 100 (Fig.6). The results indicate that compared to Haft-Hoz neighborhood, the effect of enclosure on the sense of territory is stronger in West Town (Table 3 and Table 4). As it is observed in following Table 5 and Table6, the calculated value of Pearson's correlation coefficient indicates that there is a significant and direct relationship between the sense of enclosure and the sense of territory in both samples (-1<P<1). Besides, Sig=0, i.e. the level of significance of the model is less than 0.05, so H1 statistical hypothesis is rejected with 95% certainty, while the H0 hypothesis is confirmed.

Finally, when the semi-private and semi-public territory was investigated in West Town, it was found that development of

CONCLUSION

Organization of living environment is possible through a clear definition of private and public arenas and determination of a spatial hierarchy. Such defined arenas increase the sense of belonging to the environment which personalizes residential environments. Enclosure is among the quantities that play a significant role in defining the spaces. In fact, enclosure is the factor that defines a space as a ground for occurrence of other events. Enclosure is an individual subjective ground to define the space and the primary factor in conversion of space into place. Territorial behavior has a significant role in damping the life tension and determining the role of individuals. The important matter is to design the territories in a way that people can distinguish between its primary, secondary and public types, so that the users can have the suitable dominance on them. The role of territories is to ease social interactions and perpetuate the social systems. Usually primary territories such as houses, achieve this aim in a proper way, because people respect these territories which are easily recognized in the society; but sometimes, it is difficult to recognize secondary and public territories. Therefore, some modern methods should be innovated in design which can define these territories clearly. We should be certain that the users and strangers are able to recognize the different layers of the territory in our design which specifies how long each territory can be possessed. Otherwise, there would be conflicts between the individuals,

and more legible and strong urban spaces can be designed through increasing the enclosure in this area.

Table 6. The results of Pearson's Correlation in West Town.

Correlations			
		Territory	Confinement
Territory	Pearson Correlation	1	.599**
	Sig. (2-tailed)		.000
	N	52	52
Confinement	Pearson Correlation	.599**	1
	Sig. (2-tailed)	.000	
	N	52	52

Table 7. The results of Pearson's Correlation in Haft-Hoz Neighborhood.

Correlations			
		Confinement	Territory
Confinement	Pearson Correlation	1	.596**
	Sig. (2-tailed)		.000
	N	42	42
Territory	Pearson Correlation	.596**	1
	Sig. (2-tailed)	.000	
	N	42	42

dead end alleys and neighborhood watch stations have created hard boundaries that limit the entrance to the alleys and U-turns. Therefore, considering the stronger sense of public territory in Haft-Hoz compared to West Town, it can be said that the most important factor that increase the sense of security and privacy among the residents of a residential complex, is the intermediate space between primary and secondary territories

the possibility of violation goes up, and the owner of these territories would have to take special and expensive actions in order to define, manage and defend them. It is vital to present a design which can encourage people's participation and provide a sight on the streets which can guarantee the safety of people and their properties and apply design strategies that limits the accessibility and penetrability, should secure people and

their properties inside these areas. These strategies would be possible through creating a subjective and physical enclosure in individuals. While both ideas have their own advantages and disadvantages, the determinant subject is also related to density of pedestrian movement.

Qualitative and quantitative comparison of the theoretical basis of enclosure in the urban spaces of Iran with the similar samples in European cities indicates that the effect of spatial features such as climate and culture is desired in the determination of the enclosure. A hypothesis can be established in which any principals for developing a quantitative and qualitative coordination in enclosure of urban spaces should be based on historical, cultural, and climatic studies and the conditions of time in order to provide the most desirability for the users.

Therefore, based on primary studies in urban spaces and considering temporal, cultural and climatic conditions, four main solutions are suggested:

Quantitative increase in enclosure through promoting its quality;

Increase in subjective enclosure through developing indicative elements in specific distances

Decrease in the risk of being invaded by strangers through a hierarchy of pedestrian access

Development of local territories through designing territorial hierarchy.

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