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Sense of Territoriality and Revitalization of Neighborhood Centers in Boshrooyeh City

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***Abstract*—**The role of neighborhood center as semi public (the balance space) is disappeared in bonding between private and public in new urbanism. In this way, a hierarchical principle in the traditional neighborhood center appears to create or develop the conditions for residents` relationships and belonging. This paper evaluates significant of hierarchical principles of the neighborhood center in residents` territoriality and its factors. In this way Miandeh neighborhood center from Boshrooyeh city was determined as a case study area. Results indicated that a hierarchical principle is the best instrument to improve the territoriality as the subcomponent of place belonging in residents. The findings help the urban designer to revitalization the neighborhoods and proceedings in organization of physical space.

***Keywords*—**Belonging, Neighborhood center, Revitalization, Territoriality

I. Introduction

THE environmental psychology that was shaped during the 1950s and 1960s focused research attention on the physical features of the environment where human behavior occurs. The aim of environmental psychology is to gain a better understanding of the relationship between human behavior and the physical environment. According to Churchman [1] environmental psychology has focused its interdisciplinary discourse with those who design and plan the physical environment, toward architects. In this way two concepts that should be considered is environment and people. In this study neighborhood center (NC) introduce as a place where people behavior (territoriality) occurs.

Environmental perception has been reinforced by focusing on the experiential sense of place associated with urban environments [2]. This process always is associated with knowledge of human about the environment. Further Rapaport [3] stated that environment in addition to physical factors includes the meanings, forms, and messages that people understand, decoding, and judge them according to the roles, expectations, motives, and other factors.

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II. Sense of Belonging and Concept of Territoriality

A. Definition of Belonging and Territoriality

Place can be described in terms of many multi dimensional physical and psychological environmental attributes. Canter [4-5] stated that place is identifiable with the union of cognitions, affect and behaviors of the people. Sense of place makes belonging sense with environment and continuity presence for better utilization of the environment. It could appear in location person`s life and will deeper with time passes [6].

People describe themselves in terms of belonging to the place [7]. Place belonging is defined as a sense of belonging to a particular place as if it were one's own home, is territory based and can be distinguished from belonging to a social group based on ethnicity, gender, religion, and so forth [8]. According to Jacobs and Appleyard [9] people are entitled to a minimal level of environment livability, identity, control and access to opportunities. People also should feel that some part of environment belongs to them.

A territory is a geographical space, bounded in formally or informally. Territorial space is punctuated by geographical features and human beings and their ways of life [10]. Sack [11] stated that "Territoriality in humans is best understood as a spatial strategy to affect, influence, or control resources and people, by controlling area; and, as a strategy. Territoriality is intimately related to how people use the land, how they organize themselves in space, and how they give meaning to place."

Territoriality since the 1960s, been divided into two different fields of interest: human territoriality [12];[13];[14] and politico-geographical territoriality [15]. Human territoriality can be viewed as a set of behaviors and cognitions a person or group exhibits, based on perceived ownership of physical space [13].

Territories are produced everywhere in different ways and in different contexts, and by encompass a wide range of phenomena such as a nation, an urban district, a parking space, or someone's favorite bench [16]. The concept of territoriality expresses an interest in the way in which social, cultural and personality systems are related in the space of a hypothetically bounded geographical area, such as an urban region [17]. Therefore, as a review territoriality is involved tangibles object such as physical space and possessions.

Likewise, these definitions indicated that territoriality occurs in every person and every level of his or her feeling within a place after a degree of ownership and control to an object or physical spaces. While the relationship between the design and use of urban public places has been complex to explore. In this study has been argued that the relationship between space and humans not only can be explored but also is fundamental to urban studies.

Subject of territoriality are important aspects of urban design and functions. We are constantly obliged to observe territorial divisions and classifications. Although territoriality for Newman [18] is a critical mechanism for creating the impermeable residential environment but according to Altman, we argued that NC can provide mental barriers for stranger, and it prepared safety and defense in neighborhoods for residents. Indeed, the security of the space automatically occurs.

According to Newman [18] the main effect of creating 'defensible space' is that provide a system to allow residents to control surrounding their area. He believes that sub-division of space into zones of control is because of clear division of space between public, private and semi-private space through the use of boundaries in both real and symbolic shape. The other types of control are feelings of community, residents' perception of areas and spaces around them as their personal space [18].

On the other hand, the last level of territoriality (defense) that limits the possibility of entry, it is not our point. As noted, in public space with the low level of control over the environment is a little opportunity to defend it. However semipublic space can provide a degree of control in residents over their neighborhoods. Madanipour [19] argued that benefits of the boundary between the public and the private faces two directions; it keeps the distractive material out of the public arena and, on the other hand, protects private life from the public gaze. The separate identities of the public and private realms mainly result from the construction of the boundary between them.

The dominant theoretical framework of Newman [18] and his theory are about defensible space. In this way, he argued that defensible space is activated through three components such as territoriality, natural surveillance and image/milieu, which rely on environmental design (Fig. 1).

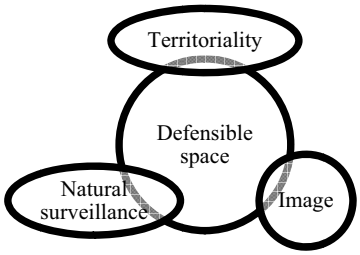

Fig. 1 Newman`s point of view about Defensible space

B. Dimensions of Territoriality

As mentioned by Low and Altman [20] they identified three forms of territory includes primary territory (owned by residents), second (medium level of control), and third (public level with low control) that are related on four provided factors (Fig. 2). Madanipour [19] in his book provide definitions of territoriality according to Altman and Low about four forms of territory; a. depending on the duration of occupancy b. the cognitive impacts on the occupant and the others in generating a sense of ownership c. the amount of personalization d. the likelihood of defense when violated.

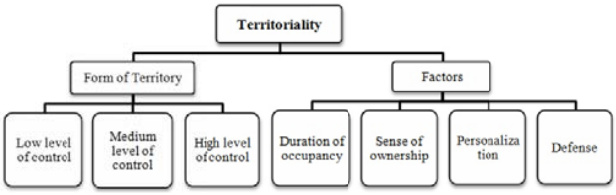

Fig. 2 Low and Altman`s points of view about territoriality

Brown [21] argued that territorial feelings and behaviors are important aspects of organizational life. They divided territoriality behavior to ownership as a main aspect and its three components include marking, control, and defense. Pierce argued that psychological ownership is rooted to three components; need for self- identity, need of people to their own place, need of people to control their environment [21] (Fig. 3).

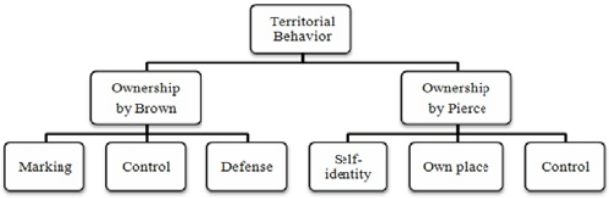

Fig. 3 Brown and Pierce `s point of view about ownership

One of the main dimensions of territorial behaviors is marking [21]. Marking also can be involved in physical domain boundaries such as physical symbols, signs, wall, and specific buildings. Hierarchy acts as a marking with its instruments and creates the boundaries and makes control of a territory (Fig. 4). Personalization also is an important type of marking that allows people to demonstrate their identity and foster a sense of belonging to the environment of space.

People define themselves in part of their surrounding place. Therefore, people try to distinguish themselves among their place and activity. Neighborhood mosque, Hoseyniyeh, and other buildings are the specific places that residents create their feeling of owner, control, defense, and activities within. As a result can argue that territoriality is a tangibles object like physical space and intangibles such as roles and responsibility.

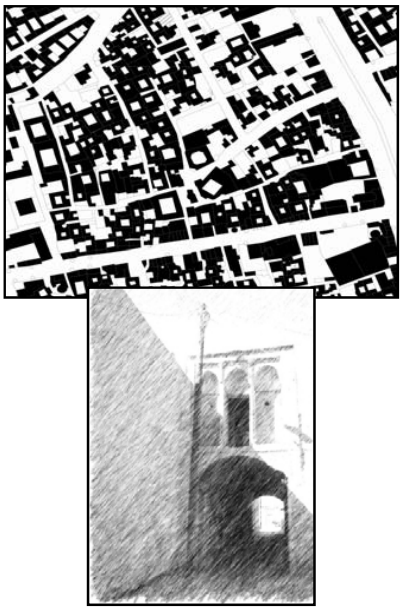

Fig. 4 Hierarchy and Realm Principles in the Miandeh neighborhood spaces of Boshrooyeh City (Author)

C. Hierarchy of Urban Space and Difference between Private and Public

Urban spaces in historic areas are based on the hierarchical movement from macro to micro. In this hierarchical system, the most important urban spaces are the covered semi-private spaces between houses and the central square of the neighborhood. Habibi [22] presented principle of urban design and Isfahan school. He defined hierarchy and territory (realm) as principles that influence to urban spaces, buildings arrangement, and architecture. He also expressed that every urban space in macro and micro scale has its private. Hierarchy in urban space is the natural way for organization of space. Hierarchy in urban centers needs to the dominant center feed main activities of the center [23].

Evidence of new urban structure shows the discontinuity of neighborhood spaces. Individuals in their movement from private to public area of their city space have no sense of belonging to their milieu and neighborhoods. Hierarchy of space will create and foster the sense of belonging in residents based on territoriality and its factors. This sense can persuade the responsibility in residents toward their neighborhoods. In the lack of boundary between private and public people have no chance to establish their belonging, control, responsibility, and defense.

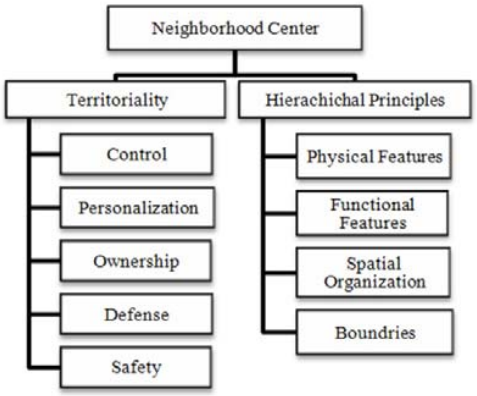

Fig. 5 Conceptual Framework of Territoriality and hierarchical principle (Author)

According to territoriality and hierarchy definitions, we reached a schematic of affective components toward the neighborhood center in a conceptual framework (Fig. 5). Overview of definitions presented in a conceptual framework. Briefly, this figure provided series of integrated communications between place and human behavior as important factors to fulfillment of belonging toward a place. Our argument is NC with its hierarchical and realm principles can have significance positive consequences in territoriality with its components.

III. Development of Miandeh Neighborhood Center

Boshrooyeh is a small city in the Southern Khorasan of Iran. It has 13 neighborhoods which among them only four neighborhoods are located in the traditional area. Miandeh neighborhood center (MNC) located in north-west of the city (Fig. 6). It was chosen due to its importance compared to other neighborhoods. The NC provides a mixture of 570 residential units, and was influenced by the design principles of Islamic small city settlements.

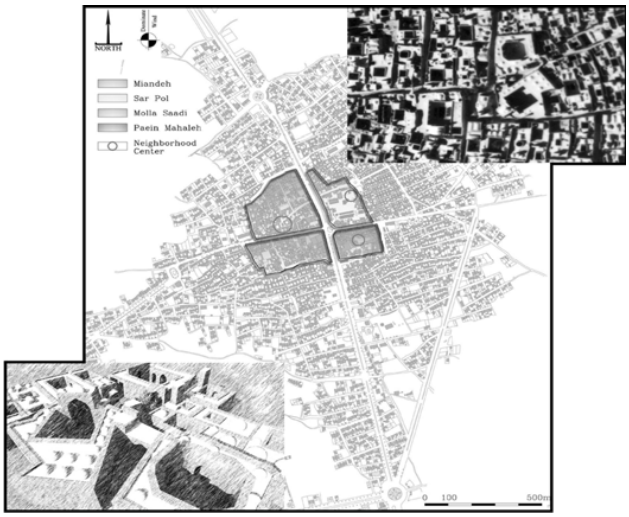

Fig. 6 Location of Miandeh neighborhood center (Author, based on Cultural Heritage Organization)

Prevalent style in construction of Boshrooyeh city is Isfahan style with its principles such as space hierarchy, the balance and harmonizes with human environment. Main structure and urban tissue of the city from Qajar period (1791 to 1925 A.D.) had no major differences with the Safavid period (15th to 17th A.D.). With born of Tehran style in the mid-course of this period can see changes in new spaces, but these changes have occurred later than other cities.

In Pahlavi period (1925 to 1979 A.D.) structure of the city and urban development were the same with the system of inside the city wall. The city's physical structure was also similar with past and along the streets and alleys. Between years 1956 to 1964, the city is divided into two parts by North – South Street to within 12 meters. Residential neighborhoods have kept their main structure and network. Although the major change and the first urban planning action, which should be called the beginning of the historical centre evacuation from services and people, occurred simultaneous with the development of a new street and neighborhoods.

After the Islamic Revolution (after 1979 A.D.) due to the spread of urbanization and construction of spaces and a neighborhood center (Sar Pol) were damaged with the excuse of modification of old tissue. Whereas capitation of residential function in the city shows that are more than city requirements. The major results of modernity to contemporary architecture and urbanism are structural rupture, discontinuity of space, and build a new area of the city without regard to hierarchy of urban space and factors such as climate, social, and cultural.

IV. Quantitative Assessment

Based on the population statistic in 2006, the population of Boshrooyeh city is 16,115 people. From this number 860 are inhabitants of the old fabrics. According to Municipality and other utility organizations, Miandeh neighborhood in 2010 has 287 residents. Therefore, 250 sets of the questionnaire have been distributed among residents who live and used NC. According to Sekaran [24] the appropriate sample size should be not less 30 and over 500. Simple random sampling is one of the probabilistic sample methods that utilized in this study.

Distribution of the questionnaire with the participants started with a short introduction to give them knowledge about the hierarchy principle as well as the satisfied of the research. For every individual resident was presented goals and purposes in the effective way. This indicates that residents have the high degree of defense and responsibility to their NC. The Survey instrument and Likert-type scales was used as the quantitative method for evaluate residents' territoriality toward NC attributes (hierarchy of movement and spaces).

Fig. 6 is provided by literature reviews, which focus on resident's sense of belonging with neighborhood center characteristics (Hierarchy). Variables are include; safety, control, ownership, defense, and personalization. Resident`s territoriality to a place was measured and evaluated by these variables.

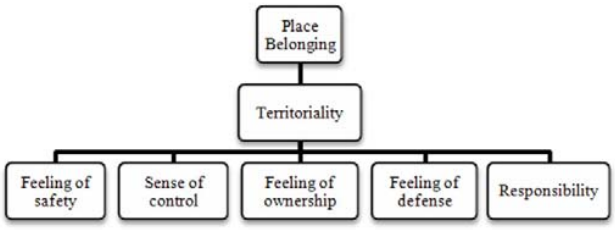

Fig. 6 Variables of Territoriality

In this part to compare whether there is significance between the mean of two sets of data the T-test statistics and Independence t- test was used to determine the mean of two independent samples. Also it used to compare two groups consists of different samples. Table I provides descriptive statistics, including the mean and standard deviation.

T-test analysis was used to compare whether there is significance between the mean of two sets of data. Independence t- test was chosen among three types of t-tests among one-sample t-test and paired-sample t-test. The independent t-test was used for testing the differences between the means of two independent groups. It is particularly useful when the research question requires the comparison of variables obtained from two independent samples [25]. The t-test statistics can check in two situations like the equal variance assumed, and not equal variance assumed. In t-test, variables must be binary not triplex or pentamerous for those data have use ANOVA.

TABLE I
Descriptive Statistics of Territoriality Variables

No	Descriptive of Data	Mean	Std. Deviation
1	Feeling of safety in NC	4.57	.656
2	Ability to Control	4.18	.795
3	Feeling of Ownership	4.69	.523
4	Defense to NC	4.02	.909
5	Responsibility to NC	4.24	.831

Table II represents the mean score for five domains of territoriality. Respondents were chosen high mean score among all variables. Majorities of means also show the high sense of territoriality specially feeling of belonging to Miandeh neighborhood center and safety seen as a high mean scores of respondents to a place.

TABLE II
Effect of Ownership in Territoriality Factors

No	Descriptive of Data	Owner		Tenant	
		Mean	Std. Deviation	Mean	Std. Deviation
1	Feeling of safety in NC	4.70	.656	4. 54	.648
2	Ability to Control	4.20	.773	4.10	.871
3	Feeling of Ownership	4.76	.462	4.45	.639
4	Defense to NC	4. 65	.896	3.13	.864
5	Responsibility to NC	4.31	.799	3.98	.891

It can be seen in table II influences of ownership to territoriality factors that shown by differences in the mean between owner and tenant respondents.

Results determined the tangible difference between respondents. Ownership as a factor of territoriality has high effect and higher mean in residents. Therefore, respondents who are an owner have a higher sense of territoriality to their neighborhood center. Although tenant respondents also are shown the high mean score to their territoriality.

Table III provides results from the independent t-test (Levene`s test and equal variances assumed t-test) to compare five domains of territoriality. As a general description, Levene's test for equality of variances tests the hypothesis that the two population variances are equal. In the Levene`s test, the corresponding level of significance is large (p-value > .05). In t-test for equality of means if the p-value was less than < 0.05 it means null hypothesis is rejected, and the people opinions is different about question and vice versa. This is made at the significance level, α=0.05 (5%) or confidence level (95%) [25].

TABLE III
INDEPENDENT SAMPLES TEST

Levene's Test for Equality of Variances				t-test for Equality of Means			95% Confidence Interval of the Difference	
No	Descriptive of Data	F	Sig.	t	Sig. (two-tailed)	Std. Error Difference	Lower	Upper
1	Feeling of safety	3.513	.053	-1.379	.170	-.163	-.396	.070
2	Ability to Control	.510	.476	.707	.480	.101	-.182	.385
3	Feeling of Ownership	18.122	.000	3.405	.001	.311	.131	.492
4	Defense	.173	.678	2.977	.003	.477	.161	.793
5	Responsibility	3.358	.050	2.289	.023	.338	.047	.630

In table III can be seen that feeling of safety, belonging, and responsibility to Miandeh neighborhood center as a territorial factor shows Levene's test p-value is greater than 0.05 in these three items which mean the variances is the equal. In equality of means, p-value is less than 0.05, which indicated people with different ownership have not same assessment in these three factors. On the other hand, p-value greater than 0.05 in ability to Control and defenses are indicated that ownership has same assessment in these remained factors.

As mentioned by [26];[20];[13] ownership has an important role to create a sense of belonging and territoriality. It also can be viewed as a set of behaviors based on perceived ownership of physical space. Responsibility to NC shows respondents make the neighborhood center as a personal place and for this reason they have responsibility toward it. Likewise, Lang [27] expressed that territory places are recognizable by personalization.

The most obvious finding to emerge from this study is that identified urban spatial units and difference between boundaries (private and public) can create feeling of affiliation (belonging) and make people to use and protect them. Consequentially territory and territorial behavior have a special significance in order to satiate basic human needs like identity, safety, control, and defense.

V. Discussion and Conclusion

Knowledge to environmental psychology will assist urban planners and architects to create an appropriate place to improve the belonging in people toward urban spaces. The main implication for urban designer concerns the design and arrangement of physical space in the neighborhoods. Urban designer should find ways to foster effective territorial behavior in residents. Based on this study hierarchical organization of space in traditional cities is a valuable principle that can be utilized in design of new town to established sense of belonging in residents.

The life of the city depends on the degree to which its streets are perceived to be safe. Jacobs and Appleyard [9] expressed that by creating some spaces and barriers such as turfs can limit the number of possibilities to achieve safety in a place. In addition a mentioned difference between private and public or hierarchy in spaces does not mean the established wall between territory or neighborhoods, but also this point that boundaries combine the transparency and permeability, and then they support relation between boundaries.

Having an area of personal territory in a public space is a key feature of many architectural designs. Based on Rofe [28] each person living in a neighborhood has a unique sense of it. In conclusion, neighborhoods center can provide a unique sense over the semi-public area.

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