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District 10 in Tehran: Urban Transformation and the Survey Evidence of Loss in Place Attachment in High Rises

Roya Morad, W. Eirik Heintz

***Abstract*—**The identity of a neighborhood is inevitably shaped by the architecture and the people of that place. Conventionally the streets within each neighborhood served as a semi-public-private extension of the private living spaces. The street as a design element formed a hybrid condition that was neither totally public nor private, and it encouraged social interactions. Thus through creating a sense of community, one of the most basic human needs of belonging was achieved. Similar to major global cities, Tehran has undergone serious urbanization. Developing into a capital city of high rises has resulted in an increase in urban density. Although allocating more residential units in each neighborhood was a critical response to the population boom and the limited land area of the city, it also created a crisis in terms of social communication and place attachment. District 10 in Tehran is a neighborhood that has undergone the most urban transformation among the other 22 districts in the capital and currently has the highest population density. This paper will explore how the active streets in district 10 have changed into their current condition of high rises with a lack of meaningful social interactions amongst its inhabitants. A residential building can be thought of as a large group of people. One would think that as the number of people increases, the opportunities for social communications would increase as well. However, according to the survey, there is an indirect relationship between the two. As the number of people of a residential building increases, the quality of each acquaintance reduces, and the depth of relationships between people tends to decrease. This comes from the anonymity of being part of a crowd and the lack of social spaces characterized by most high-rise apartment buildings. Without a sense of community, the attachment to a neighborhood is decreased. This paper further explores how the neighborhood participates to fulfill ones need for social interaction and focuses on the qualitative aspects of alternative spaces that can redevelop the sense of place attachment within the community.

***Keywords*—**High density, place attachment, social communication, street life, urban transformation.

I. Introduction

WHAT makes human beings complex organisms is their desire to stay unique as well as to continually change in different scales in order to fit within various environments. As stated by Kopec, the three fundamental theories on human-environment relationships are human focused, environment focused and mutual relationship theory [1, p. 35]. Among the three, the human focused theory in which human beings are central to their physical environment is studied further in this paper. In this theory, an effective environment is a space that concentrates on human needs. By referring to Maslow's Hierarchy of Needs, human needs are arranged into a hierarchy. This five-level hierarchy, starts from the most basic needs and levels up to more demanding needs [2]. Moreover, as one need is satisfied, the fulfillment of such need is no longer motivating for human beings. Based on the census data provided by the Statistical Center of Iran, the rate of five safety-need factors—such as residing in typical residential units, access to basic living facilities, literacy rate, employment rate, and health insurance—is above 80% in Tehran [3]. Therefore, through a responsive design approach love/belonging needs, which can be explained as a sense of attachment to a person and a place, can be fulfilled.

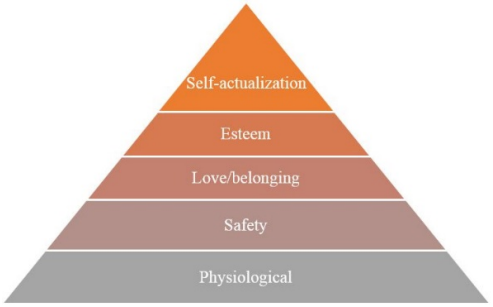

Fig. 1 Maslow's Hierarchy of Needs

II. Physical Space

A. Built Environment

The natural features and things that surround human beings are the two most relative definitions of the word *environment* to this context [4]. By merging these two definitions, environment can be categorized into two groups: the natural and the built environment. The natural environment is anything beyond human interference and the built environment is defined by man-made surroundings. Since, human beings initially experience their built environment; the design of these man-made surroundings has a major impact on their lives. If these physical environments are smartly designed they can satisfy human beings' social needs and result in place attachment.

B. From a House to a Home

From the formation of early settlements, which were due to the need for shelter (a fundamental physical need), societies

Roya Morad is working as an architect at New Wave Architecture, Tehran, Iran (phone: 00989309891116; e-mail: moradroya@gmail.com).
W. Eirik Heintz is a professor of architecture at the American University of Sharjah and is Director of the Foundations program (e-mail: heirik@aus.edu).

have advanced and human's expectation of a house has evolved. People no longer just seek shelter to fulfill their physiological and safety needs; rather they give importance to more intangible needs. In district 10, people desire for a place that they can call home; a place that is a reflection of their identity [5] and where they can built strong relationships.

C. A Neighbor and a Neighborhood

A neighbor can be defined as a person who lives next to another and a neighborhood can be referred to as a place where people live, work and communicate with each other. Due to common spaces that are shared among the residents, interactions with varied depth are created between the neighbors, thus emphasizing the importance of the built environment in a neighborhood.

III. From Early Neighborhoods to Districts in Tehran

A. Early Neighborhoods

In Tehran, the first four residential neighborhoods were Bazaar, Chaleh Meydan, Sangelaj and Oudlajan [6]. The traditional concept of a neighborhood was a place for people to live close to one another with the centrality of a cultural or communal area [7]. This emphasizes the importance of religion, commerce and habitation in the lives of the people and how well the built environment responded to such needs. However, the ever-developing construction in the capital which was in response to the population boom altered the concept of a neighborhood altogether. The new neighborhoods turned into commuter places and the majority of the people only lived physically adjacent to one another without a mutual sense of community attachment.

B. The Appearance of Social Class within the Districts

Up until the beginning of the Pahlavi I dynasty (1925-1941), the map of Tehran was similar to that of the Naseri era containing 10 neighborhoods. After that, the capital continued to grow in the North-South direction (in line with the communicational axes) [8]. In the first Comprehensive Plan of Tehran, the city was divided into three categories that roughly matched the income level of the people [9, p. 27] which was also directly proportional to the population density. The southern part, the mid part and the northern part of the capital was dedicated to the highest, average and least population density respectively [9, p. 27]. Moreover, in this plan the best proposed growth direction was towards the West due to the natural limitations faced in the other directions [9, p. 74].

IV. Housing Transformation in Tehran

A. Single Unit Housing and Street Life

Single unit housing is a house that operates independently from other blocks and usually accommodates a single family. In the traditional single unit housing in Iran, a central courtyard was the intermediate space between the private living spaces and the semi-public-private street. The front stairs of these houses were an important "transfer space" for the neighbors. These siting elements offered full control of two territories: the house and the street, and encouraged social interactions among the neighbors [10]. The street life as an extension of the single unit housing system possessed qualities that played a significant role in creating social communication and place attachment.

B. Verticalization in the 20th Century

Tehran experienced *Modernism* starting around the 1930s [8]. During this period the new transportation system became the dominant element of the city [11] causing a change in the spatial organization of contemporary Iranian housing [12]. With an increase in the population of the capital, there was a shift towards shared housing and as technology advanced, Tehran witnessed verticalization. Although maximizing the land usage was a successful response to the increase in housing demand, it also increased the urban density and reshaped the capital.

C. The First Apartments in the Capital

Other than the financial incentives that were offered to construct mixed-use buildings during the reign of Pahlavi I (1925-1941), it was not until 1970s that the capital focused on massive housing projects [13, p. 67]. Behjat Abad Complex is the first residential high-rise in Tehran which was built around 1964-1970 [13, p. 69]. Ever since, the city has faced an unprecedented wave of high-rise residential building construction.

D. Consequences of High-Density Housing on Place Attachment

High-density housing is a confined residential space packed with large number of people. In such a housing system the number of acquaintances is high and the behaviors of the residents directly influence one another. As the high density houses in Tehran tend to be occupied by people from various backgrounds, this study investigates the result of this diversity on the depth of social communication and place attachment among the neighbors.

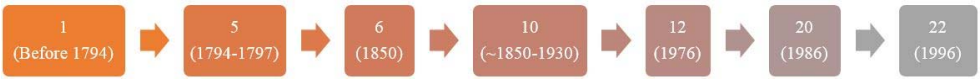

Fig. 2 The increase in the number of districts in Tehran through time

V. District 10 – The Work Area

District 10, as one the oldest and second smallest districts in Tehran, [14] was selected as the work area. It is located in the West of Tehran and district 2, 11, 17 and 9 are its neighboring districts [15]. This district is situated between Azadi Street, Qazvin Street, Shahid Navvab-e Safavi highway and Shahidan Street respectively to the North, South, East and West [16, p. 2]. Starting with the destruction of Rey during 13th century

[17] that resulted in the migration of its inhabitants to Tehran, the capital has witnessed a never ending population rise. In this period, various migrants from different backgrounds became attracted to district 10 due to its small scale affordable housing and easy access routes that were offered in the area. In order to respond to this population boom, single-unit housing gradually transformed to high-density apartment blocks. This step redefined the character of the neighborhoods and converted district 10 into the densest district in Tehran [18, p. 11]. In addition, in terms of urban land usage, residential use at 57% is the dominant type [15] with 53% of this area accounting for small residential units [16, p. 12]. Considering the insufficiency of land dedicated to social services [16, p. 5], this paper explores the consequences of high-rise apartments and the absence of street life in district 10.

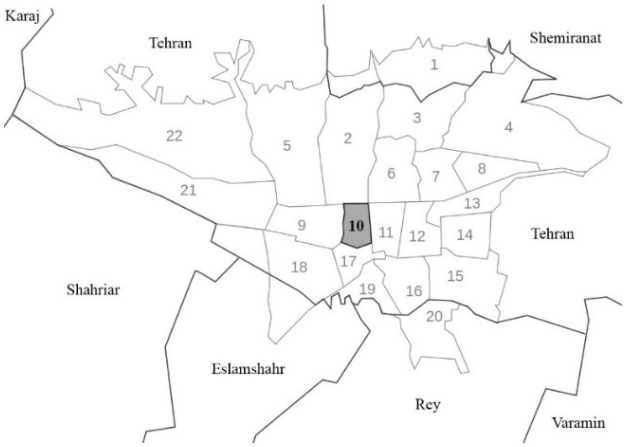

Fig. 3 Location of district 10 among the other 22 districts in Tehran

VI. Methodology

A mixed method approach combining theoretical study and field survey is used to understand the context and to delineate the aspects to be investigated in district 10. In order to collect direct data, a questionnaire in the form of a field survey is used. Through the questionnaire, social data from 200 residents of this district are collected. To reasonably represent the residents of district 10 and to collect diverse opinions, surveys were administered in several locations and at various times throughout the week between 2019 and 2020. A cluster sampling was used primarily to gather data and a stratified sampling method was applied secondarily. In the first step, the respondents were clustered based on their residency location and only the cluster that included those residing in district 10 was selected for sampling. This cluster was the most suitable because the residents of district 10 are more exposed and are the most affected by the qualitative and quantitative aspects of the social services provided in the studied district. Secondly, the population is stratified based on the residential type: high-rise apartments and single-unit. Moreover, through a convenience sampling method, data are collected from each stratum.

In order to collect qualitative and quantitative data from the survey respondents, the questionnaire consists of open-ended and close-ended questions. The questionnaire is categorized into four sections. The first three sections consist of primary and indirect questions that establish the legitimacy of the respondents, identify the residential mobility level and investigate the communication level between the residents. The last section encompasses direct questions that aim at comparing the depth of place attachment in the two residential housing systems. Furthermore, using statistical techniques the data collected from the questionnaire are analyzed with possible approaches and recommendations towards reviving the lost place attachment among the residents in high-rises.

VII. Results and Evaluation

Based on the data obtained from the questionnaire, it is confirmed that there is an indirect relationship between the height of a residential building and the level of social communication among its residents. With the absence of traditional street life and the shortage in qualitative and quantitative community spaces, the poor level of social interaction and place attachment is intensified in district 10. Close to 50% of the survey population have lived more than 20 years in district 10. This indicates that they have experienced both the housing transformation as well as the street life within the district so their opinions are reliable and valuable to this study. In addition, more than two-thirds of the respondents have lived above 10 years in the district; therefore, they are highly familiar with the level of community spaces offered in their neighborhood. Nearly 50% work within the district and seven out of 10 have relatives in the neighborhood which increases their exposure to the built environment. Moreover, close to 90% reside in 3-4 storey high apartment buildings and more than half live in 60-99 square meter flats with a majority family size of 4 and above. It is important to understand that in this study the 3-4 storey high buildings are considered as *high-rise* structures when compared to the traditional single-units in district 10. These cramped living spaces increase the need for smartly designed community spaces that shape social interactions and strengthen place attachment among the residents.

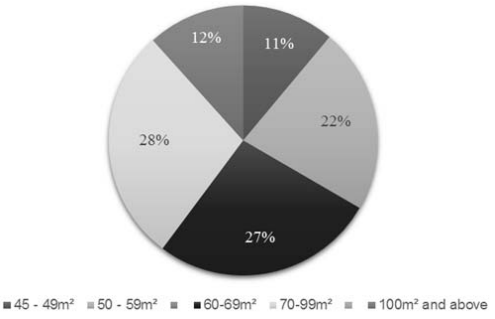

Fig. 4 The size of the respondents' residences

Residential mobility as a factor that influences residents' willingness to initiate conversations with their neighbors is

relatively low among the participants in district 10 because the majority are homeowners and they do not own another house. This demonstrates that a responsive design within the building or in the community spaces can easily promote social interactions among the neighbors.

Section C is explores that although the majority of the high-rise residents consider that knowing their neighbors is vital, as high as two-third are not familiar with their neighbors. The findings identify that 68% of the occupants talk to their neighbors only regarding common building responsibilities and problems. This percentage drastically differs from their previous neighborhood relations and engagements when residing in single-unit housing. As predicted, the respondents' cooperation level, trust and care regarding their neighbors in high-rise apartments is at the least possible level. Therefore, the quality of the current built environment isolates the residents and does not satisfy their social need of belonging and place attachment.

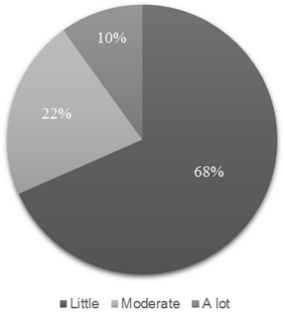

Fig. 5 How often the respondents speak to their neighbors

The final section aims at revealing the relationship between residing in high-rise apartments and the level of social communication between the residents. The studied group in this section is only limited to the participants who have first-hand experience of previously residing in single-unit housing and who currently live in apartment units. Close to two-third of the residents mentioned that the traditional single-unit housings in district 10 with vivid street lives, more closely reflected their identity and encouraged social interactions among the neighbors. With the disappearance of sense community and the loss of place attachment, the reason behind 70% of the respondents' willingness to relocate to other districts in Tehran is uncovered. In addition, 85% of these residents strongly believed that they were also generally happier when previously residing in single-unit housing. The majority of the respondents in this group recognize house ownership as an important variable that increases the quality of acquaintances between the neighbors. With an increase in the number of families in each residential building, owning a house gains more importance as it can greatly influence the number of new annual acquaintances. According to the residents, higher independency and more common space are the next two variables that have a high impact on the depth of relationships among the neighbors in high-rise apartments. It is in the nature of human beings to seek freedom. Therefore, when their daily activities at home are restricted to certain apartment rules and they are obliged to be answerable to their neighbors, they tend to be less pleased with their surroundings. In turn, this dissatisfaction reduces their willingness to engage in social communication with their neighbors. One another hand, the two traditional common spaces: streets as semi-public-private spaces and courtyards as semi-private spaces were more precisely structured than the confined common spaces in the current high-rise apartments.

Acknowledging the disappearance of traditional common spaces, the questionnaire further aims at discovering the qualitative and quantitative aspects of the modern community spaces within district 10 and how the residents fulfilled their belonging needs. More than half of the respondents confirmed that the community spaces were at the least possible level and that they were unsatisfied with the current situation. While the community lacks in providing interactive spaces for the neighbors, the residents were then asked to state the locations that they chose to meet their friends and how much time they dedicated to respond to their social needs. The two most favorable places for the participants were their private homes followed by cafes and restaurants and thirdly by parks. The choice of enclosed spaces and parks as the only outdoor spaces in district 10 reflects how unsuccessful the designers and urban planners have been in filling the void between neighbors in high-rise apartments. 40% of the respondents meet their friends on daily basis and 20% dedicate at least once per week to engage in face-to-face communications. This proves that although residing in high-rise apartments reduces the occurrence of in-depth conversations among the neighbors, the residents still attempt to create meaningful social interactions with their carefully selected group of friends.

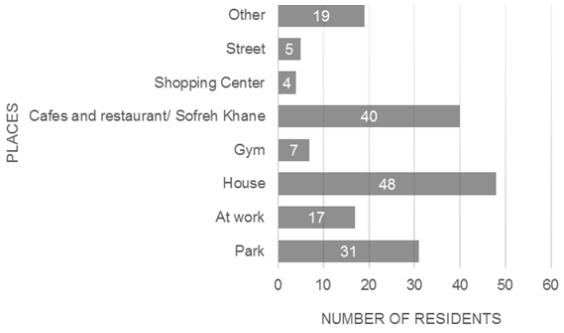

Fig. 6 The places that the residents met their friends

VIII. Conclusion and Proposal

In general, the findings from the questionnaire support the notion that urban transformation in district 10 has negatively influenced place attachment among the residents of high-rise apartments. With the least possible interaction level and inadequate information, the high-rise apartment dwellers regarded their neighbors dissimilar to themselves and tended to socially communicate with their friends. Although, these residents have more acquaintances when compared to single-unit occupants, their encounters are not at personal level,

therefore this does not translate to closer relationships. An increase in the number of acquaintances is also more difficult for residents to regulate and this explains the loss of community support among the survey respondents. With a poor sense of community, the place attachment among the neighbors is weakened. The survey population in district 10, like German and Italian high-rise respondents in a similar study, stated that they are willing to know more about their neighbors and to possibly make friends [19]. This important issue reveals that if the built environment is smartly designed, the occupants are ready to initiate meaningful conversations with their neighbors. As Gifford suggests, the outcomes of living in a high-rise can partially depend on several non-building-height variables as well as the quality of the surrounding built environment [20]. Variables such as the residents' freedom in choosing their housing type, the number of residents on each floor and the proximity of high quality green spaces are among the factors that influence the occupants' social interaction level. There are many studies that, through the smart use of design elements, have been successful at reviving neighborhood identity and place attachment. For example, creative outdoor designs have proved to boost outdoor socializing levels [21] and roof gardens as social spaces can potentially have the benefits of garden apartments among high-rise residents. Alternately, besides acting as a stepping stone towards reviving the lost place attachment, high quality public spaces can create social, economic and environmental values for district 10.

REFERENCES

[1] D. Kopec, Environmental Psychology for Design, Canada: Fairchild Publications, 2006.
[2] A. Maslow, "The Theory of Human Motivation," *Psychological Review,* vol. 50, no. 4, pp. 370-396, 1943.
[3] Statistical Center of Iran, "General Census of population and housing (General results of the city of Tehran)," Statistical Center of Iran, Tehran, 2009.
[4] Pearson Education , Longman Dictionary of Contemporary English, Fifth ed., Harlow, United Kingdom: Pearson Education Limited, 2009
[5] A. Shahcheraghi and A. Bandarabad, Environed in Environment, Tehran: Jahad Daneshgahi, 2017, p. 347.
[6] H. R. Norouzi Talab, Tehran (past and present) A Glance at the features of Life, Art and Architecture, Tehran: Yassavoli Publications, 2011.
[7] S. Mazlumi and V. Pour Keramati, "Designing a 250 Unit Residential Complex with the Approach of Apartment Garden in District 22 of Tehran," Shahid Beheshti University, Tehran, 2016.
[8] A. Rajabi, "The Process of Spatial Formation and Development of Tehran," *Geographical Researches,* pp. 73-98, 1998.
[9] A.-A. M. Farmanfarmaian and V. Gruen, "The Comprehensive Plan of Tehran 1968," Plan and Budget Organization of Tehran, Tehran, 1968.
[10] M. Hatami and H. Nadimi, "Designing a Residential Complex through the Approach of Defining Public and Private in Housing," Shahid Beheshti University, Tehran, 2010.
[11] S. M. Habibi, Z. Ahari and R. Emami, "From the Collapse of Fortifications to the Idea of Highways (The Background of Urban Planning and Designing in Tehran 1930-1968)," *Soffeh,* vol. 20, no. 50, pp. 85-102, 2010.
[12] M. Vakili Sani, S. Pourdeyhimi and A. Agha Latifi, "Open Spaces in Apartment Complexes," Shahid Beheshti University, Tehran, 2015.
[13] B. Alemi, "High Density Housing in Height," Shahid Beheshti University, Tehran, 2001.
[14] Municipality of District 10, "Introduction of District 10 in Tehran," 11 May 2019. (Online). Available: http://region10.tehran.ir. (Accessed 3 April 2020).
[15] F. Sasanpour, M. Soleimani, P. Ziaian and Z. Delfan Azari, "The position of Regions in Sustainable Urban Development," *Human Geography Researches,* pp. 159 - 176, 2015.
[16] Design and Architecture Consulting Engineering, Regional Development Plan of District 10, Tehran: Ministry of Housing and Urban Development, 2005.
[17] A. Eghbal Ashtiyani, History of Mongolia, Tehran: Amir Kabir Publication, 2005.
[18] Municipality of District 10, The Golden Comprehensive Book of District 10, Tehran: Municipality of District 10, 2006.
[19] R. Williamson, "Socialization in the High-Rise: a Cross-National Comparison," *Ekistics,* vol. 45, pp. 122-130, 1978.
[20] R. Gifford, "The Consequence of Living in High-Rise Buildings," *Architectural Science Review,* vol. 50.1, 2007.
[21] C. J. Holahan, "Environmental effects on outdoor social behavior in a low-income urban neighborhood: A naturalistic investigation," *Journal of Applied Social Psychology,* vol. 6, pp. 48-63, 1976.

Roya Morad is born in Iran in 1991 and lived in United Arab Emirates for 17 years before returning back home. Morad has studied Architecture at American University of Sharjah, United Arab Emirates from 2010-2011 and earned a B.S in Architecture from Islamic Azad University of Qazvin, Iran in 2017. She is working as a Researcher and Architect at New Wave Architecture, Tehran, Iran from 2018.

William Eirik Heintz is a Professor teaching architecture and foundations at the American University of Sharjah in the United Arab Emirates. He earned a Master in Architecture degree from Harvard University Graduate School of Design and a B.S. in Architecture from the Ohio State University. He has taught for more than 20 years at institutions such as Louisiana State University and the University of Louisiana at Lafayette prior to teaching in the Middle East.