

## Case Study

# The Study of Residential Open Space Effect in Spatial Form Reorganization

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**ABSTRACT:** The restrictions available in metropolis extend the construction of residential complexes and reduce the percentage of private court in contemporary architecture. In addition to supplying the light of interior places and natural ventilation, residential open space is considered an opportunity to have more relationship with nature and a place for social interactions. Upward to the limitation of internal space in residential units and its relation to exterior space, traversing up and recognizing the current land of open spaces will result in designing the residential open spaces more consciously in the hereafter. In countries such as Iran, which have started and proceeded to build residential complexes using western models, the open spaces of residential complexes don't create enough belonging feeling in residents. In this research, we try to analyze the key components of the quality of open residential spaces in relation to design in the urban spatial organization approach.

**Keywords:** Metropolis, residential open space, social interactions, Spatial organization

**RUNNING TITLE:** Residential Open Space Effect

## INTRODUCTION

Open spaces between residential buildings are placed in daily life where residents have relations with nature and spend their leisure time. In the past times, the courtyard was the beginning and the most accessible space to experience a tight relationship with nature and open place. In current conditions, the houses built in urban cores such as Tehran are not capable to supply most of the Iranian life needs. Considering the decrease of per capita level of residential floor area, if residential open space can supply the individual and societal requirements of residents in various ages, it can be possible to transfer most of

the life activities of the interior space to open spaces of complexes and to correct the life shortcomings in residential units with low areas around. Hence, brushing up and paying extra attention to design interior space of residential complexes as a joint courtyard is necessary in more residential complexes. Main design principles in contemporary time of urbanity are much important for designers make better decisions to lead public realms being more useful and have identity. This issue means how we can create a sense of place to attach people in spaces especially in border of public space and private one.

## LITERATURE REVIEW

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### *The purpose of open places*

In Expanding residential complex scale and their open spaces, residential open space scale goes beyond the household; it found a scale such as local and urban open space. In most instances, some divisions of open spaces are publicly accessible for other occupants of the city; therefore, studying its specifications needs to examine the clear place in local and urban scale. The urban center is like a parasite composed of numerous full and empties and changes their shapes based on the situations and are factors to draw masses. The metropolis is a topographic point for meeting and social interaction, and urban spaces as Social life scenes are areas for meeting people, despite all their disputes. The concept of urban place is set in relation to the concept of social membership; it intends that the city should provide an opportunity for its users to assemble and select with its spaces. (Pakzad, 2007).

Public space is a joint area that people do functional activities and perform festivals which connect community members to each other, either routine activities or cyclical festivals, a scene in which the collective life is shown, space in which individuals are share with strangers, people who are not their relatives, friends or colleagues, a space for religion, trade, and sport and also a space for peaceful coexistence and impersonal meetings that express collective life, urban culture and everyday issues and also it affects them (Madani Pour, 1996). Open space makes the foundation and the structure of space with establishing relations between various activities. According to Halprin, quoted by Pakzad (2007), open spaces are elements that give exceptional quality and personality to the metropolis. He split up these spaces into two categories: Public open space and private living place. He saw the open space as factors that include historical and urban forms; He also looked at them "Arteries of the Community Body," that pump health for the city and its citizenry.

Open space as a supplementary for green space results in reduction of human and constructional density. These places offer opportunities for creative growth, social interaction and conflict; applications such as establishing

communication, relaxation and recreation are very efficient in cutting down pollution and improving the surroundings. Residential open spaces are somehow crystallization of collective life, nature" (Nozari, 2004). "These spaces provide an opportunity for meeting and social interactions" (Waxman, 2004). Jacobs (2006) as a forerunner has noted the importance of public space in creating successful residential neighborhoods, and public and private life. Public space that Jacobs states is a place to visit, but a particular call which is not sincere and not anonymous. He opposed particular type of call named "togetherness". He thinks that if people find something in common, they should obtain many more affairs in common (Mirgholami, 2006). According to Jacobs (2006), if a public space creates only a heartfelt or anonymous relationship, it will be unable to create an informal and an impersonal relationship motivating collective life. Subsequently, many planners used the Jacobs's ideas with the slogan "If you create a space, people will arrive"; yet, they were unaware that collective life affects space formation.

As a consequence, a strong notion such as defensible space, Newman (1996), which was prompted by the Observer eyes on the street of Jacobs, makes a place for repelling than a place for communication. Public space of William White has apparently drawn from a middle-class male and specific position. A relationship which represents the best marriages and all real friendships. A relationship in which people sing about the ultimate significance of their lives (Mirgholami, 2006). According to Jay Bowen (2010), gardens have concrete effects, on social relationships in urban centers. In the script entitled "Public Space", Carr and Francis (1992) considered the following three characteristics as essential ones for any successful public open space: "accountability", "public-oriented" and "meaningfulness". Responsive spaces are spaces designed and constructed to fit the users' needs. Basic needs which people are asking for open space are comfort and quiet. Open spaces are places for mental and physical body processes such as working, gardening and a blank space for meeting other people and nature. In public places, people experience an ownership sense

and there is no boundary for the presence and use of space for them.

Meaningful locations allow people to create a nexus between the location and themselves, and are in intercourse to their societal and physical placement. [Gell \(2010\)](#) considers the quality demands of public spaces in protecting (against traffic, accidents, crime, violence and bad weather conditions), comfort (some facilities for walking, sticking out, sitting, seeing, talking and listening, playing games and doing bodily functions) and pleasure (scale, some facilities for enjoying of appropriate climatic conditions, quality of aesthetics and experience of a positive sense). The tradition of meeting together in urban open spaces is main character of each ritual ceremony; therefore, the temples can be reckoned the first urban public places. These spaces are evident in the ancient cultures such as India, Egypt, Iran, Greece, and South America. Building public spaces near churches and squares connected to mosques in Islamic countries in the Middle Ages is followed by this procedure. Designing open spaces was applied by constructional bodies to construct urban units during centuries, and old textures of Islamic and European urban centers were made by this method.

Regardless of building placement, function of open space includes environmental issues such as accessing to sunlight and natural breathing as well as cultural and societal qualities. Open space results in toning up and grounding of social relations in the neighborhood and supplying of residential textures connection ([Nozari, 2004](#)). This space is a supplementary space for green space and is very significant in terms of cutting down human and constructional density. These open spaces provide opportunities for creative growth, socializing areas field interaction, social interaction and conflict, and applications such as establishing communication, relaxation and recreation; they also are very effective in reducing pollution and improving the environment ([Norouzi 2004](#)). Residential open spaces are somehow crystallization of collective life nature ([Nozari, 2004](#)).

#### *Residential open spaces*

The presence of the courtyard as a residential open space is changed as residential units are changed in modern architecture. Receiving a specific courtyard is not possible for many households and its dignity has changed to public open space in the region. The way of forming a residential texture in current cities is in such a way that all spaces are private or publicly organized, and intermediate space has gone.

The structure of the courtyard in Iranian house can be studied from two directions/aspects. In terms of functionality, the courtyard is a blank space for getting close to the nature, for furnishing light and comfort of interior space as well as a topographic point to establish social activities. In terms of natural philosophy, the courtyard is located in the center of introverted houses, and the house structure is determined based on courtyard location. It offers the possibility of incorporating the interior spaces and courtyard, expanding the functions of the house and spaces in certain places. Two functional and physical attacks are identified as follows:

#### *A: Functional structure*

“The courtyard of each home is a contemplation of its inhabitants’ culture” ([Girling, Helphand, 1994](#)). The courtyard of an Iranian home is symbolic of nature; water, tree, flower and birds are the main elements of its landscaping. In a detailed article that [West \(1957\)](#), writer and wife of the British Consul at Iran in the late 13th century, composed around the Iranian gardens, she considered the tendency of Iranian masses to possess a quiet corner and a green oasis with regular and precise geometric form in the vast dominion of this nation as a psychological disposition to overlook the surrounding natural lands. In accession to its aesthetic aspect, being near to plants affects the inhabitants’ spiritual matters in terms of psychologically ([Kaplan, 1984](#)).

The courtyard is the beginning and the most accessible space for close relations of people with nature; it also supplies the direct contact with plants and water for people during the

daylight. In Iranian architecture, when people are in interior space, the nature is connected to their everyday life through observing nature from a window. Direct relationship between interior spaces and courtyard make the extension of everyday activities possible. In houses with a yard, many uses of interior spaces such as sleeping, feeding and entertaining move to the courtyard in some seasons. The courtyard is a space for children's activities at all times of the twelvemonth.

#### *B: Physical structure*

The space is organized based on courtyard in introverted houses. Designing a house is taken up from the yard, and closed and covered spaces are placed around it. "Courtyard was used to build a relationship between residents and nature on the unitary hand, and between residents and social club on the other hired man "(Haeri, 2009)". In extroverted houses, the house privacy is determined by courtyard boundary. Main spaces of a household had a direct relation with courtyard and sometimes threw their names like three-door and five-door according to their relationship with the grand. Northern and southern major predominantly spaces are situated along the symmetry axis of the yard; windows which get down to the underside of the window makes it possible to view the courtyard completely.

The carnal knowledge of interior spaces with courtyard is in such a way that interior spaces can be blended with a courtyard in necessary cases and its spatial structure expands. The principal frontage of the building is toward the courtyard and a landscape is projected for all distances in front of the thousand. Sunlit spaces and a blank space to live in summer are respectively located in northern and southern sides of the yard. The seats which are not so useable are located along the easterly side of the household because of disturbing light. Country yards fronts that made by building and covered spaces at all. In those parts that there is no building, wall plays an active role in defining yard. Its stature is in such a fashion that creates the sense of Includeness in the court and it is decorated by Taegu and arcs designs and colors. The floor of the courtyard was always

lower than street level and entrance corridor never entered into the house directly (Haeri, 2009). Entrance hall and entrance corridor, connect the inside and exterior components to each other.

The geometric configuration of the courtyard often was regular and rectangular; the setting of the courtyard in the first step of designing, provides cut Corner geometric Pools and gardens can also conform to this geometry. The presence of various interior and exterior yards is a reply to the ecological needs of central hot and dry areas in Iran and also a response to the traditions of Islamic societies based on hospitality in fact that was a kind inclusive idea competition (Memarian, Brown, 2006). In larger houses where there is more than one yard, usually the larger or exterior courtyard is public, and the smaller and interior ones are private and belong to some specific activities such as kitchen and lavatory. At that place is one spot in the middle of the courtyard and its surrounding is designed in such a manner that its water can be utilized for washing and its extra water can be utilized for irrigating the plants. The presence of water and trees was obligatory in the courtyard in such a manner that the courtyard has named as a selection of heaven in an Iranian family.

The courtyard is the most accessible position for a gathering. Due to its specific flexibility, the courtyard can be easily converted into a festive or funerals space. In the yesteryear, the gatherings of extended families usually took home in the yard. Since extensive families changed to nuclear ones, most of social activities in households were relatively disappeared and therefore the court lost its social function. Since family members are decreased, family gatherings moved into interior spaces.

Since courtyard position was shifted from the essence of house after Qajar era, its organizing and relation role was cut down but it was also local and individual, and has privacy. Nevertheless, had the purpose of supplementary place for the building not a main space Rising land and building cost, and changing of house into a capital merchandize resulted in growth of density and built areas,

reduction of open spaces; furthermore, the emergence of residential apartments changed the courtyard into a joint space. Courtyard has lost most of its roles in modern architecture. It receives no private ownership and it's not so big that collective actions can come in. In many instances, it is switched to a space for auto traffic and its pedestrian accessibility going to cut back. When more than one family survived in the Iranian traditional houses, the courtyard was formed by interconnected yards. These cases of houses were replaced by multi-family households with a new cast in the late 1930's; these new households were more appropriate to the cities (Alemi, 2008).

In the bulk of modern houses, the courtyard is located on one side and the building is located on the other side along a piece of possessive land and two models of northern and southern yards are dominated on it. Southern yards are situated between the building and neighboring buildings, and have more inclusive and less and the mien of a car is normally not possible there. Northern courtyard is divided from the main passage with a wall and has more Supervision... From the front and surrounding sides. In this placement, a parking space or a space for car traffic/passing to the parking place is definitely considered; therefore, the share of green space is concentrated. Modern cities are the answer of such view that building can construct only at the conclusion of the country or near the passageway; and just 60 % of the estate area can be made.

#### *Typology of residential open spaces*

Since the start of the twentieth century, two opposite views of Le Corbusier residential units and neighborhood or local unit proposed by Clarence Perry were suggested for a neighborhood unit which had significant structural and social effects on formation of a neighborhood and design of residential complexes. Le Corbusier designed a residential complex named Marseille which included 330 residential units on 17 floors in a vast green environment with shop, kindergartens and other public facilities (Eini Far, 2007). This 17-floor residential complex is an independent neighborhood, which can meet its users'

demands.

Clarence Perry defined a model in the stratum of "neighborhood unit" as a location that includes an elementary school, a small park or a playground, small shops and a combination of buildings, streets and public services with strong access. Implementation of this project was in a flat form which was common along the map and its three-dimensions are neglected (Lang, 2005). This example was mostly used in the preparation of new residential neighborhoods in urban centers of the universe since the 1930's it also was considered the basis of "New Urbanism".

The primary dispute between these two models is arrangement way, and the level of candid and tight space next to each other that each one is the basis of different residential types. Contempt of the ordinary people's imagination, increasing the floors has not necessarily resulted in a population increase. Arrangement of a fixed number of residential units in a same land leads to the formation of voluminous different qualities and residential open space. Increasing the top leads to increase open space per capita and to decrease residents' private space (Biddulph, 2007). To pay to typology, it is necessary to determine its type and criteria. Sorting out data based on joint principles and characteristics is an important step toward seeing the phenomena. Because of this classifying things using geometry and regularity or in other words typology has a long history in architectural theories.

Based on research needs and backgrounds of forming housing patterns in different countries, the house typology is done from the scale of complex to block, including interior space of the unit and the whole residential unit with various criteria. One of the common typology in scale of urban designing and Non-profit sets, single-family residential units, including detached, semi-detached, row house and court homes. In this classification, arrangement of residential units in land and adjacency has been the standard of typology. Other measures such as companionship of full and empty space and spaces with courtyard are classified based on courtyard occasion in the form of me-shaped,



L-shaped, U-shaped, T-shaped, H-shaped, Z-shaped, square and linear (Kambi, 2003)

In the Bible entitled “Courtyard houses: A housing typology” German researchers, Pfeifer, Gunter (2008), divided houses into the following groups: houses with central gardens, L-shaped houses, terrace houses and atrium houses. Typology of inter part of the mansion is done based on access way or the relation of interior space. Typology of high residential complexes consists of several stops; it is founded on the typology of accessibility type and the relationship of inner spaces as well as the arrangement way, and exposed and close fellowship. The predominant characters of these complexes are environmental arrangement, individual blocks, row blocks and mixed composition of other blocks (Biddulph, 2007).

Central arrangement is established along the precepts of traditional homes with central court in Iran. In this case, the main facade of the blocks is toward the public passage and the private space is situated behind the pulley. Arranging blocks around a central core results in the formation of private open space which can be jointly used for all units are divided into small private parts. In single arrangement, high residential blocks are separately placed next to each other. In this case, the probability of ventilation and natural skylight is more than the other types and open space is drawn with a different character. The row type is the simplest answer to set the cubes. Setting up these blocks relates to climatic considerations or Urbanism criteria of the area (Eini Far, Ghazi Zadeh, 2010).

#### *Appraisal of residential open space*

To distinguish the residential open space, it is first necessary to possess a comprehensive definition for it. In this study, residential open space of each residential area which is not built is defined in boundary or a round of a residential complex that taking advantage of social and economic benefits are directly or indirectly available to users. Residential or boundary buildings or wall of the complex surrounds the physical structure of this quad.

Clear space is defined by buildings, but it does not admit it.

Open space includes concrete and abstract sections. Routes, communicative public spaces, pavements, gardens and green spaces in neighborhood, bridges, and constructions that surround the body of open space are concrete and structural image that the addressees have relatively the same ability to understand them and they are also perceived using five senses. Some other significant factor in open spaces is human and his presence in space that creates a major function in space quality (Pakzad, 2007). Therefore, Schultz (1966) believes that form and content of structure of architecture should be simultaneously considered for its comprehensive analysis. Although, designing relates to functional and spatial aspects of the environment, it is not separable from its usage. Derived from separation of city planners, its constituent parts can be the following factors: activity, phase and space”). On the other hand, the semiprivate-semipublic nature of residential open space and its continuing relationship with individuals’ lives confirms the importance of its upkeep and management. Hence, the functional, spatial and managerial features of open spaces are continually effective at assessment of open space. In the rest of this clause, the evaluating factors for each indicator will be separately named.

#### *A – Functional Features*

In all the presented definitions, natural action is conceived an integral portion of the open space structure; in this study, furthermore, it will be considered the main basis for understanding the structure of residential open space. Action is the cardinal aspect of each natural and man-made location. Although it is difficult to predict how to use the space, a lot of studies have been conducted on how to use the neighborhood home. Hester (1984) divides the route of using neighborhood space into two parts based on activity: 1. Activities depended on interior space 2. Activities depended on recreational services. Behaviors depended on house form a large part of the behavioral patterns.

Gell (1987) divides activities that take place in

residential open spaces into three groups:

**Functional-Essential activities:** such as daily shopping, going to school, and so on which are more related to walk.

**Recreational-Selective activities:** those related to the structural conditions of the environment; these activities come about if people tend and if the appropriate conditions of time and place present such as exiting out to acquire some refreshing air, playing, walking, and so forth

**Social activities:** The realization of social activity, structural conditions preste the environmental spaces and setting up social interaction. These activities include greeting, talking, arguing and other collective activities. According to Gell, selective activities happen in states with higher quality. Essential activities remain stable in, and social activities are the results of quality and duration of happening of the preceding activities. Carr (1992) extracted the sub-activities placed in each group of Gell's classification in western culture. In his survey, traffic, transportation and car repair are functional and essential activities; roaming, sitting, sleeping, playing and gardening are selective activities; talking and looking are social activities. It is clear that according this table must be justified according to Iranian culture.

The nature and circumstances of the actions that take place in spaces are loosely connected to two main and central factors: culture and environment (with spatial- structural feature). Withal, the direction and the tier of influence of these two factors on the way of happening on these natural actions or behaviors and behavioral practices are not identical Activities recognition and evaluation will result in a fuller understanding of users' needs and obtaining an appropriate response to it. Action is the consequence of two separate but interrelated notions: vitality and diversity. Animation refers to the act of people who utilize the distance and it is the most important feature of successful public open spaces. Jacobs (2007) considers the following four conditions for vitality realization: presence of more than two main functions, the low height of most blockages, a

miscellany of buildings with diverse ages and conditions, and presence of people regardless of their aims. In the first condition: variation in users; in the second and third conditions: structural variation; in the fourth condition: variation in natural process.

Diversity is one of the supplies for vitality and dynamism in a post; at the low scale, designing an attractive city which is appropriate to the activities and pull people in big scale, society, ethnic and environmental factors affect the vitality On the other hand, Lynch (1997) examined the vitality in large scale and considers five factors of meaning, relevance, accessibility, monitoring and control, efficiency and fairness. He only focuses on the comfort aspect of vitality and believes that the following three main characteristics are joint among all humans for vitality: human survival, having safety, and establishing structural compatibility between him and living environment.

Some factors such as societal and cultural issues are pushed aside in his classification. Paumier, quoting Khastoo and Rezvani Navid (2010), considers position, size, planning and location design as factors affecting the vitality.

Successful public spaces with person attendance. Accordingly, if designers want a crowded space, they should design in such a way that their addresses expect. The process of designing a neighborhood need to depict a balance between public and individual needs. It is important to experience the usual needs. Since personal characteristics and needs determine the neighborhood space, revealing the unparalleled needs of a neighborhood unit is the key to a right purpose. On the other hand, comfort standards are indispensable and critical to the continued presence of masses in a place. Space structure can stand upon the comfort realization in two ways. The interference of designer in the amount of shade, sky oversight, kind of materials, and distance to natural and man-made obstacles leads to alterations in mood. Organizing activities in various sections of the site through affecting on users' activities, designer can affect their perceptions of ease.

*B- Spatial features*

Physical environment should be explored from different people's perspective. Human, according to his nature, pays more attention to the visual and spatial qualities of the surrounding environment (Kaplan, 1989). When residents talk about their physical environment, they pay more attention to features of landscape design than house style or appearance, height, color and building facades. A good landscape, wide vision, proper maintenance is closely associated with the good visual view. Thus, a good landscape can lead to establishing a confident relationship with the residential environment (Marcus, Sarkissian, 1986). Structural attractiveness of the surrounding environment can be an important factor in residence selection. In late years, environmental, psychological researchers in the area of visual perception area have focus. Ed on the balance environmental, psychological discipline / cohesion and diversity / complexity (Kweon, 2010). Kaplan and Stephathe relationship consistency, complexity, legibility and secretly as the main criteria to assess the landscape.

Solidarity and complexity are two elements that are promptly comprehend at the inaugural instant, but an assessment of the environment based on the readability and its point of secretly requires greater identification and environment inference. On the other hand, solidarity and legibility are comprehended by humans, but complexity requires exploration and attention to the environment. (Kaplan, 1982) (Table 2).

One of the most outstanding researchers in the area of natural landscape assessments is. Tveit, (2006) from Department of Landscape Architecture and Spatial Planning, Norwegian University Of Life Sciences. Based on studying the literature available in the area of landscape assessment, he regards the criteria of stewardship and nature-oriented in addition to two measures of solidarity and legibility in terms of beauty. On the other side, considering the semi-public nature of clear space and its direct relationship with the residents' lives, privacy is one of the primary characteristics of residential open spaces. Established on the mentioned models, assessment criteria of residential open space come with four factors:

A – Solidarity B - readability C - nature-oriented and D – Privacy, because the integration of these factors bears on people's perception of residential open space. Moreover, management and maintenance are identified next to spatial elements to evaluate the open position.

Solidarity:

- Legibility
- Nature-oriented
- Privacy
- Maintenance
- Safety
- Methodology

Given the presented principles, residential open spaces have various features and dimensions, and their principles and their planning criteria can be applied to achieve an appropriate residential environment. Some of these dimensions which their related criteria were noted in reviewing the principal disciplines and will be likewise utilized to analyze a case sample are as follows:

-Transportation and access system including relative position to access passages hierarchy and city communicative network, the effectiveness way of traffic load and access to public transportation system in the city.

-Structural dimensions, including density, unit height, arrangement way of blocks and residential houses, the level and character of residential open space

-Dimensions related to urban appearance include spatial unity and coordination with adjacent urban context, supplying the view and the absence of secrecy

-Dimensions including level and quality of green space maintenance, level of pollution and noise pollution.

-Accessing to services, facilities and importance, urban applications including appropriate access to services and urban equipment in several functional levels, compatibility of residential complex with adjacent applications

-Social and cultural dimensions, including safety and protection, neighborhood relations



and resident participation

Although real dimensions of these residential complexes in the strain of urban contexts and also residential neighborhood include many events such as economic dimensions, some measures can be employed to examine the issue in case sample more accurately counting the research limitations and also concentrate on assessment of residential open spaces; the following table presents the primary criteria.

In general, accessibility can be considered an important factor in determining the quality of urban transportation system, the position of access passage in local or urban scales and also available communicative network; on the other hand, solidarity has a mutual relation with accessibility; in general, it can be said that appropriate and inappropriate status of accessibility in a context or residential complex can have a direct effect on solidarity of that context or complex in such a way that it includes the structural dimensions in this discipline as well as spatial quality of blocks, arrangement of space and density. These qualities and their balance plus type of view, spatial unity and also adoption to urban context present legibility.

Nature-oriented criterion is somehow considered the representative of the environmental dimension in studying the residential open spaces that evaluate the green spaces as well as the way of dealing with different types of environmental pollution. Nevertheless, the primary goal of mentioning this criterion is the quality of understanding the landscape and environment that lastly, one of the other main used criteria is safety and privacy available in the setting that includes personal and private events as well as societal and ethnic dimensions. Descriptive and evaluative research methods are applied in the present analytical research. Moreover, the quantitative analysis is done through scoring the residents' responses after evaluating the extracted criteria. On analysis stage, first, classifying documentary, statistical and spatial data with regard to the research objectives was done on the subject and field form, interviewing, photographing, using documents and available

maps and also reference information and finding are classified. Onalytic hierarchy process (AHP) was used for qualitative assessment.

#### *Recognition regardddied limits*

Regarding the discussed concepts in subject, and main factors, Zargandeh district which is located in area district 3 of Tehran city, beside having notable city texture has beautiful natural landscapes. Considering the importance of vision in this study, investigation of such samples can be effective in reaching the general subject.

This district has pieces of 50 to 60 square meters and width of the passages is in the small texture and their connection in most of the places is possible through stairs. Residential buildings are mostly of 2 to 3 floors. The past of this district which was among the villages of Shemiran has been preserved organically and with those potentials and capabilities (Pic 4). Generally the main problem in doing the general texture is accessibility and decrease of belonging sense and place for people. So considering this beautiful tourist attractive and organic way we can represent some strategies for vision assessment.

In universal, the individuality of the traditional town of Tehran has a spatial unitary because the constructional materials have remained the same in city level. Although each space is complete in itself, it generally, in a larger scale, depends on the surrounding space that various dimensions can be taken in this event. However, after changing urban textures, particularly the entrance of modernized elements, especially in urbanism and architectural, this unity has broken and result in the creation of a un proportioned solidarity of two types of texture next to each other. Features of old texture caused by climatic conditions, cultural and social traditions and environmental factors that are rarely observed in new texture. Therefore, the texture of desired limits has been changed. also we can find a arrangement of open spce typology in texture.

To examine the texture of the limits and to

assess the desired measures, the bounds can be separated into four fine-textured according to total features. This class is performed based on newly-made and old type and density, and relying on classifying houses and religions of residents' living in the region.: In general, we can test these measures and value in the grain.

In general, criteria extracted from theoretical basis can be dissected and appraised as follows:

**Accessibility :** In general, one of the most important measures of residential textures is their proper and appropriate approach which are moved by their position in the urban center and access to important traffic arteries and lymph glands. On the other hand, different designs of residential building have a significant effect on communicative networks because of population and building density, ratio of built level, level of land separation, designing and its placement. Carrying capacity of surrounding passages, the outcome of these residential complexes in misaligning of communicative hierarchy in all three primary types of grade 1, major and minor collectors, the number of trips, traffic effects and evacuation issues in

rush-hours and access way in emergency and critical events are significant.

A map of access hierarchy shows, the said texture in term of access to communications lines is not in a safe position. Although, it is near to three main first class, there is an inappropriate relation in hierarchical divisions in such a manner that this admission is non-continuous in smaller scales with regards to discontinuity and deterioration. The mentioned routes have positive potential; they also create suitable conditions for adjacent texture, but this traffic comes up some problems in facing passages standards. Linking to the central square as traffic proxy in urban adjacent textures as well as having main passages are main advantages of this grain.

Access issues in the said texture were asked residents through various questions, including inhabitants' satisfaction level from accessing to main streets and communicative lines, the simplicity level of accessing and the point of using the public conveyance system. Its rating is expressed in the variety of scoring results from the study.



Fig 1: Land line and sky line of the case study

**Legibility:** Based on variation in scale, shape and structural properties, local landmarks, index points, height and proportions, residential textures have various effects on the environment in terms of visual and urban landscape which make the generality of urban legibility. The more important examples of these effects can be analyzed in terms of vision obstruction, landscape supply, the absence of unity, harmony with background, facade effects and buildings decoration. By this criterion, two major components of spatial unity, and urban appropriate view and harmony are studied in the said texture. In general, the view of texture depends on having buildings with various heights and forms; considering the worsening of this texture, the survey is not appropriate. The absence of proper coordination and height on the unitary hand, and the absence of spatial constancy on the other hand has that urban open spaces in this texture don't have an appropriate quality in terms of perspective. Nevertheless, the existence of signs and significant indicators in the texture somewhat strengthened this legality and in several areas could improve a generality of the discipline. Sky line which is another ingredient in shaping the position shows a relative undesirability in structural integrity to accomplish the desired legibility (Fig. 1).

The residents' response of the mentioned texture about the doubts linked to view the quality of the texture of living place shows the absence of satisfaction that some signs of desirability can be simply observed in some cases of indicator buildings and as well in green space dominated in residential open spaces of the grain

#### *Nature-oriented:*

Factors include various factors in quality of nature-oriented of the said texture; they have a subject connection with environmental quality that includes plant density, arrangement way of open green spaces, a vast extension of water supply, the way of excreting sewage, excreting garbage, wind, dispersion, audio pollution. Given the environmental situation in texture, the dispersion of green spaces in centralized and distributed form has a better situation than

urban surrounding texture in such a way that plant density was higher in the eastern part, which is probably related to the culture and religion of the inhabitants in terms of social and cultural dimensions. These open green spaces in residential fine-textured prevent noise resulted from traffic in major or minor courses in such a way that the compartment of these natural organic buffers are clearly apparent in fine texture near main streets.

**Solidarity:** urban textures with regard to the existence of various urban spaces usually have special order and solidarity that It could be generally shown in the form of traditional and local urbanism; however, because of the occurrence of general changes, this criterion is changed by the structural-spatial challenges, walls, building density, generality of shaping space and mass, functions, the relationship between body and meaning, housing patterns. The said texture has some positive and minus points in building layout, spatial practices, resulted surround, offering open space and also creating aesthetic combinations; in general, some of them can be observed:

Walls available in texture show a beneficial quality in terms of harmony, rhythm, contrast and identity in some regions; however, these elements work against each other and provide a kind of lawlessness in some countries where the texture deal with two types of old and young ones. In conditions of urban edges importance played by these walls in texture, they maintain their initial state which is deduced from local architecture and Urbanism or change to other types of qualities due to newer construction.

In some other manner, this solidarity resulted from main ingredients can be effective in social dimensions related to texture physics; generally, the sense of belonging to space or in other words sense of distance and belonging can be the best means to judge the character of this criteria. In a general review, it can be said that with the presence of different religions and ethnicity among residents of the mentioned texture, formation, and relationship of culture and ideological issues, residents deal with this case differently in such a way that it can be mentioned that in places where

Muslims live, the density of new buildings is more and belonging to space is not exclusive to a specific places, and in place where different family live, the historical buildings is more and attachments to religious buildings results in survival of eastern side, and ultimately imaginative people has a significant role that these parts stay ruined because of the absence of attachments.

**Safety and privacy:** they are two main sub-criteria of social standards, proper maintenance and safety of residential environments, suitable neighbor relationship, and residents' participation of neighborhood in management of different proportions. Regarding the presence of tradition and social status, which is relatively native in the said texture, it can be said that in addition to structural and spatial effects on safety, quality, the residents make a kind of safety by themselves and with regard to their acknowledgement of their living situation and diverse people. The variety and quality of neighborhood relationship as good as public participation can have a substantial effect on resolving or reducing the societal and cultural problems. In universal, given the appropriate sidewalks in the texture and also the presence of social safety in these paths, we can speak about the sound quality of this touchstone. If two terms of refuge and security are defied in psychological and structural aspects, the said texture has a honest tone in terms of safety and security from the north and center sides where end two main passages; all the same, on that point are some safety and security problems with fine textures especially in its small cores with respect to remaining organic of the spatial arrangement type and number of passages. This absence of safety and security is more obvious in neighborhood remained ruined and also don't have specific ledges for spatial definition; these places also don't have suitable lightness, appropriate functions and unity in social organization.

## CONCLUSION

Lack of preparation and design criteria of physical – spatial matter, in the construction of new urban regions can be significant problems in housing and environment roles to be pursued.

Granting to the hypotheses, specifically the urban fabric in the historic dominance implies, suggests that, as a consequence of alterations due to advances in the skill of modern Urbanism and architecture. Our ancient tissues that rely on knowledge and models during the life of its original native inhabitants have been able to strike a favorable environment, all confused in the body and its environment due to misconceptions are the challenges and changes Based on research findings that might be seen in the table can be slightly more accurate results in this case.

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