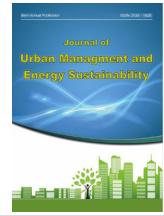


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## CASE STUDY RESEARCH PAPER

### A Look at the Concept of Diversity in Richard Sennett's The Open City Theory (Case Study: Khayyam area of Qazvin city)

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#### ABSTRACT

The diversity of the urban space is one of the basic factors in the contemporary urban design system, which is caused by the social, biological, and economic benefits, etc. it has been widely welcomed by modern urban models. However, Iran's urban planning and design system has not received enough attention, and such a weakness reduces the livability level of urban collective areas from the micro to the macro level. Since different dimensions have not been properly analyzed in the studies of the urban system of Iran, therefore, the present research aims to analyze and find the roots of the concept of diversity in the framework of Richard Sennett's the open city theory. The research method of this research is presented in the form of visual approaches and placement of each component and sub-component in all three types of tissue (intermediate tissue, new tissue and old tissue) in the study areas and in the quantitative part, the evaluation of the questionnaire based on the opinions of the experts is discussed, in this section, the Kolmogorov-Smirnov test is used to evaluate and rank the three ranges based on Friedman's tradition theory. The statistical population of this research is all professors who have opinions in this field and the sampling method is snowball. The reason for using Richard Sennett's theory is that he is trying to link between function and body with social issues in the diversity system of urban space, and Khayyam area is the example of this research. The obtained results show that according to the opinions obtained, the northern Khayyam area of Qazvin has the most diversity according to the tradition theory and Khayyam in the middle has less diversity due to the repetition of certain types of uses and the attraction of certain strata, finally, Khayyam in the South has the lowest amount of diversity due to the presence of administrative and medical centers and the loss of living space at certain times.

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## INTRODUCTION

Diversity is considered a valuable concept in the contemporary urban planning system because, in addition to the attractiveness of the space, it attracts capital and improves the environment of the space. Environmental designers have realized that diversity can increase flexibility in the urban space system, as well as increase efficiency and increase the range of space users. The variety of uses in an urban area makes it possible to meet the diverse needs of citizens and create a flexible and responsive environment (Garcia-Ruiz, 2018: 23). This issue, which is considered one of the most important components of efficient, accessible, justice-oriented, sustainable, and livable collective spaces, has been the focus of urban affairs researchers since the second half of the 20th century and in the post-modern planning system. Currently, many contemporary urban planning approaches and movements in the world, such as the modern urban planning movement, emphasize the diversity of uses in urban and neighborhood spaces. Unfortunately, in the cities of Iran, not much attention has been paid to this issue and the main reliance is still on the plans that are prepared from the upper levels and only deal with the minimum per capita. The use of such approaches has led to the fact that the current spaces do not have the necessary diversity and the variety and livability of the space are reduced to the minimum possible level and among its other consequences, we can mention the reduction of people's access to attractive spaces, the reduction of social justice and individual equality, the reduction of spatial attractiveness and the incomprehensible nature of space, etc. (Bathily, 2019: 43). Therefore, to solve this problem in Iranian cities, it is possible to examine the concept of diversity in theoretical frameworks such as the concept of diversity in Richard Sennett's open city theory, during his research, Sennett tries to discuss and examine this concept in various cities and expand the subject of his theory. In this regard, he states that diversity is not just a look at the function and body of the urban space,

and various factors such as social structures and perception of the space can be effective in the diversity of the urban system. Therefore, the purpose of the current research is to investigate and find the roots of the concept of diversity in the theory of Richard Sennett, after the investigations, an attempt is made to expand this concept in the sample of the study case, that is, Khayyam area of Qazvin city. The reason for choosing this area is the construction periods and its different structural system because the northern Khayyam is related to the contemporary period, the middle Khayyam is from the middle period and the southern Khayyam is part of the historical fabric of Qazvin city. Finally, the current research has been conducted to measure the diversity of the Khayyam area of Qazvin city based on the perspective of tradition and ranking all three ranges according to the presented components.

## MATERIALS AND METHODS

The idea of the open city was presented in various contexts by Jacobs when he argued against Le Corbusier's urban vision. Jacobs tried to understand the consequences of greater diversity and density in urban places. When squares and streets become more crowded and their public and private functions coincide, it is from such conditions that unexpected encounters, opportunities for discovery and exploration, and innovation arise (Demetriou, 2018:23). His point of view, which is also reflected in William Empson's poem, is that "arts are born from the heart of overcrowding and crowding" (Wendelmoet, 2014:21). Jacobs sought to define specific strategies for urban development to be used after the liberation of the city from the yoke of balance and integration. From Jacobs' point of view, big capitalism and powerful manufacturers tend to create a homogeneity that has a well-defined, predictable and balanced form. So, the role of a deconstructive designer is to beat the drum of heterogeneity. Jacobs said in a famous sentence, "If density and diversity are life-giving, the resulting life will be devoid of order" (Sennett, 2017:54). Openness in

frameworks such as diversity is urban evolution, the slow time that urban culture needs to take root, grow and develop and finally accept events and developments. Because of this, Naples, Cairo, or the Lower East Side of New York, despite the poverty of resources, still function in the sense that the people who live there still care deeply about where they live. People believe and love living in these places like building a nest. This form of attachment to places is a product of the passage of time (Jacobs, 2018:26). What is notably lacking in modern urbanism is the concept of time – not nostalgic retrospective time, but forward-looking time, the city as a process whose image evolves through its changing functions, an image of the city that is formed based on predictions and can adapt itself to surprises (Stefanovic, 2021:11). One of the signs of the freezing of urban creativity in the mid-1920s was revealed in Le Corbusier's "Neighborhood Plan" project for Paris. This Swiss-born architect presented a plan to replace a large part of the historic fabric of the center of Paris, in which tall and uniform buildings with a cross-section would practically destroy the public life below the buildings and at the same level as the street, and the use of all the buildings was determined based on a single comprehensive plan (Shamsi et al., 2018:21). Le Corbusier's architecture in "Neighborhood Plan" is a kind of industrial production method of building, in which, by removing the unregulated life of the people on the street level and transferring the work and life of people to the secluded corner of the upper classes, he sought to destroy social factors that can cause transformation over time (Hsueh-Bruni,2015: 4). This anti-utopian nightmare became a common reality that swept public housing construction from Chicago to Moscow, and as a result, residential buildings sprung up, which were more like giant warehouses to accommodate the destitute. Le Corbusier's idea of the deliberate destruction of vibrant street life was realized by the gradual growth of the middle class in suburban areas, the replacement of commercial streets with single-use

shopping centers, the creation of gated neighborhoods, and the construction of schools and hospitals in enclosed areas (Habib, et. al, 2023: 123). What has been added to the volume of regulations in the field of urban zoning throughout the 20th century is unprecedented in the history of urban design, and these broad and long bureaucratic regulations have weakened local growth and innovation in the design of cities and frozen them in time (Hsueh-Bruni,2015: 7). The product of excessive determination and limitation is what can be called a "Brittle city" - an inflexible city, a fragile city (Tallen, 2018: 34). The need to change use, instead of adapting and updating, often leads to the destruction of today's buildings. The excessive customization of form and use has caused a faster deterioration of the modern urban environment. Today, the average useful life of a newly built public housing in the UK is about 40 years and the same number for new skyscrapers in New York is about 35 years (Sennett, 2017: 37). At first glance, it may seem that the "Brittle city" is the driving engine of urban growth, because everything new can destroy everything old, but the existing facts point out the incorrectness of this view. In the United States, people are fleeing declining suburbs and not reinvesting to stay there, in Britain and continental Europe, as in America, inner-city renewal often means displacing people who have lived there until today. "Growth" in an urban environment is a much more complex phenomenon than simply building an alternative to what has existed until now, "Growth" requires a dialogue between past and present, "Growth" is not elimination, but a kind of evolution and transformation (Venerandi, 2019: 64). This principle is completely true both socially and architecturally. Social bonds cannot be created without the passage of time and with just one stroke of an urban designer's pen on paper and in one. Today's methods of building cities - separation of uses, homogenization of population, exclusivity through zoning, and assigning meaning and concept to each place - have de Brittle city is only a

symptom of a disease and represents a kind of view of society as a closed system. A closed system is a concept that has been the scourge of state socialism and the shaper of bureaucratic capitalism throughout the 20th century. This type of view of society has two essential components: Equilibrium and closed system integrity based on equilibrium originates from a pre-Keynesian idea of market functioning. This idea predicts some kind of minimum where income and expenditure balance (Madanipour et al, 2021: 4). In government planning, information feedback loops and internal markets are tools that can be used to avoid over-consumption of resources and extra-program commitments - Similar literature has been used in the recent reforms of health and medical services, which is familiar to urban planners and a reminder of how to allocate infrastructure resources to transportation plans. The ultimate limit of doing everything well is determined by the fear of neglecting to do other things. In the closed system, a small amount of everything is done at once. And finally, a closed system should be an integrated system regardless of diversity (Maidment, 2015: 91). Ideally, each component of the system has a place in its overall design, the consequence of this "ideal" is to discard anything that exceeds the boundaries of the overall design and is challenging and confusing - Anything that doesn't "fit" into the overall plan loses its value (Ziari and Mirmasoudi, 2022: 80). Insistence on integration puts a yoke on the neck of experience and creativity - The inventor of the computer icon, John Seely Brown, said: Every technological development at the time of its birth threatens to disrupt the functioning of a larger system, threats that modern urban design has tried to block with a multitude of rules and regulations that define historical, architectural, economic and social "contexts" - "Context" here is a humble but powerful word for suppressing everything that "doesn't fit" to ensure that nothing oversteps or challenges the boundaries of the outline (Hendrix, 2023: 3). It is the same way that errors of balance and integration have been the bane of

cohesion in the work of educational planners and urban designers, and design errors have also exposed the border between state capitalism and state socialism (Bandarabad, 2022: 25). This is how the closed system reveals the 20th-century bureaucrats' fear of disorder. The social alternative to the closed system is neither the free market nor what designers call the alternative to the Brittle city. This contradiction is not what it seems. The cleverness of neoliberalism in general, and Thatcherism in particular, was to speak the language of freedom while manipulating the scenes of the closed system of bureaucracy and serving the interests of the elite class. The alternative of a closed system lies not in the tremendous power of private organizations, but in another type of social system - An open and not closed social system (Sennette, 2017: 53).

*Various components in Richard Sennette's open city theory*

Richard Sennette points to a variety of visual forms to find components of diversity in the open city, and in this regard, he finds out what factors cause the promotion of social bonds in collective spaces, and he admits that the visual structure of evolutionary time is one of the systematic features of open cities, each of which can play an effective role in the formation of diversity in collective spaces. At this stage, the tradition tries to express four main components concerning the formation of diversity in open cities: (1) passable territories, (2) incomplete form, (3) narratives of development, and (4) democratic spaces.

**• Traversable territories**

For two reasons, the tradition describes the experience of passing through different urban territories more accurately, first, passing is the main way to know a city, and secondly, designers and architects face many problems in designing the experience of passing from one place to another which appear to be structures to block the way and prevent traffic and then describe the function of the wall as the edges of urban areas. Walls: The wall seems like a paradoxical

choice since the wall is a structure that encloses the city instead of opening it up. Before the existence of artillery, people used to take shelter behind the walls when the enemy attacked, and the gates inside the city walls were the place for merchants to pass through and monitor, and most of the time they were tax collection places. Massive medieval walls, such as those remaining in Aix-en-Provence or Rome, give a misleading overall picture of the past, because the walls in ancient Greece were generally shorter and less thick (Sennett, 2018: 45). These walls also have a special fit with the organic nature of Jacobs. These walls act like semi-permeable cell membranes, yet are resistant and porous. This double feature of membranes, in my opinion, is an essential axis for the realization of more diverse forms of modern urban life. Whenever a barrier is constructed, there must be openings to pass through, and the boundary between outside and inside, although obvious, must be permeable. The use of glass panels as a barrier or wall in the contemporary era does not achieve such a goal, because, at the ground level with the street, you can see what is inside the building, but you cannot touch, smell, or hear it. These large windows are generally stable and fixed so that there is only one supervised entrance to the interior (Sennett, 2021: 36). The result will be that on both sides of the transparent walls, generally not much evolution and development is observed. Examples are the Seagram building in New York designed by Mies van der Rohe and the new London City Council building designed by Norman Foster: In such buildings, on either side of the clear wall where you expect people to gather, you find dead space. In contrast, the 19th-century architect Louise Sullivan used the more primitive forms of glass panels more flexibly to invite people to congregate or enter the building or to wander and linger beside it - Glass plates act like permeable walls (Sennett, 2021: 36). The contrast between these two approaches in the use of glass panels in architecture shows the weakness of the creative imagination of the contemporary period in the use of mod-

ern materials in the direction of social impact (Sheikhbaglou, Boo xi, 2021: 26). Boundaries: Ecologists like Steven Gould draw our attention to something special about the natural world, where it lies between boundaries. A boundary is where something “ends”, but a boundary is an edge where different groups interact. In natural ecology, boundaries are places where organisms interact more because of different species coming together or because of specific physical conditions. An example is where the shoreline of a lake meets hard ground, this is an active area for exchanges - Here, living organisms seek to find other organisms to feed on (Sennett, 2018: 63). When we seek to strengthen social life, we try to make life in the “center” of the community more vibrant. The conditions governing the edges and margins of societies are considered ineffective and unimportant, and in fact, the result of the work of modern urban planners will be like closing the edges of communities through the construction of highways, hard and resistant borders without holes. Ignoring the conditions governing the edges of society or the lack of border mentality leads to the deterioration of interaction between different racial, ethnic and class groups in society. By prioritizing the “center,” the interwoven interactions necessary to bring together different groups of people living in cities are undermined (Sennette, 2021: 34). Porous walls and edges as boundaries are two basic physical components of open systems in cities. Both porous walls and borders create threshold-like spaces- That is, the space that is within our control, the limitations that cause “indeterminate” and unpredictable things, events and people to appear in “certain” places and centers. Lionel Festinger, a biological psychologist, said that these threshold-like spaces represent the importance of “peripheral vision” - These spaces have a different function compared to the places that gather differences and diversity in the “center”: It is on the horizon, in the surrounding space, and next to the borders that differences do not occur because a person is aware of his passage from one realm to another (ibid., 4).



### • **Incomplete form**

The discussion of walls and borders leads us logically to another systemic feature of the open city: incomplete form. At first glance, the defect seems to be the enemy of the structure, but it is not. The designer must create certain physical forms that are “incomplete” in a certain way (Jain et. al, 2008: 21). The incompleteness of the form is a concept that includes the buildings themselves and their surrounding context. This characteristic of the building’s stimulator is more important than the lower quality of the buildings in urban design: The presence of a building in a specific shape and location that causes the growth of other buildings around it, and this is where the buildings acquire their urban spatial value through the connection with other buildings. - And if each building is looked at alone and separated from others, it will find an “incomplete” shape over time. The “incomplete form” is above all a kind of creative manifesto. In the visual arts, we see “incompleteness” in sculptures that are intentionally left unfinished, and in poetry, as Wallace Stevens has said, “incompleteness” occurs in the form of “piecemeal engineering”. Architect Peter Eisenman has attempted to provide a similar mission in the form of the concept of “light architecture”, this means that the architecture of the buildings should be designed in such a way that it can be added to and removed from them after construction, and more importantly, the ability to revise the structure, depending on the needs of the building’s residents and over time, is included in the building’s architecture. This mission is in stark contrast to the simple idea of substituting one form for another that characterized Brittle city, and this contrast is demanding- an example is when we want to convert office blocks into residential buildings (*ibid.*, 29).

### • **Narratives of development**

Our goal as urban planners is to shape urban development narratives more than anything else. This means that our work focuses on the stages through which each project gradually takes its final form. In particular, we are trying to

understand which components should happen first and what consequences we will see after the first move (Sennett,2006: 276). Instead of a march with firm steps towards a single goal, we are looking for different and conflicting possibilities that each stage of the design process should open the door to - Keeping these places in the scene and allowing conflicting components to act will open up the system. Sennett does not claim to invent this approach because no story writer reveals the plot of the story and the events and fate of the characters and the basic message of the story in the first pages of his story - Otherwise, the reader will give up the gift of reading the story at the very beginning of the work. Every good narrative has an important feature and that is the discovery of the unknown- The art of a storyteller shapes this process of discovery. All in all, it should be said that diversity is in its open system, whose growth has the ability to accept conflict and heterogeneity (Annear & Falkenstein, 2022: 359). The same concept is at the heart of Darwin’s understanding of evolution - rather than the survival of the fittest or the most beautiful, Darwin sees the growth process as a constant struggle between equilibrium and disequilibrium, an environment that has an inflexible form and an unstable plan will be doomed to ruin over time. In contrast, biological diversity provides resources to nature to empower it in preparation for transformation. This biological-ecological thinking about human habitats also seems meaningful, but in the 20th century, such thinking has not been the guiding light of modern urban design. Neither state capitalism nor state socialism accepted growth in the sense that Darwin understood it in the natural world: In the natural world, there are such environments that enable interaction between organisms with different functions and abilities (*ibid.*, 36).

### • **Democratic space**

When a city functions as a system and observes the principles of porous territories, narrative indeterminacy, and incomplete form, it becomes democratic not in a legal sense but as a physical

experience. In the past, democratic thinking revolved around the official affairs of society, today it focuses on citizenship and participation (Sennette, 2018: 18). In the modern era, we do not have a similar model of a democratic space, and there is certainly no clear idea of a democratic space (Zaeri, et. al, 2023: 8). John Locke defines democracy as a set of rules that can be applied anywhere. According to Thomas Jefferson, democracy is antithetical to living in cities, the space that houses democracy cannot be bigger than a village. This view of Jefferson has survived - throughout the nineteenth and twentieth centuries, the stalwarts of democracy have linked its implementation to smaller local communities and face-to-face relationships. Today, the city is big and full of immigrants and ethnic diversity, in this city, people belong to different communities at the same time due to their jobs, families, consumption habits and types of entertainment. In cities like London or New York, which have reached cosmopolitan dimensions, the issue of citizen participation is how people feel the connection with another in a situation where they do not necessarily know that other. Democratic space means creating an arena for the interaction of these foreigners (Sennette, 2021: 50). The difficulty facing today's cities is creating a sense of connection between strangers in spaces that are less ceremonial and less related to ceremonies. This difficulty is evident in the design of public spaces in hospitals, urban schools, large office complexes, commercial street renovation projects, and especially in places where government affairs are carried out.

#### *Methodology:*

Based on the nature of the data, research methods can be divided into quantitative, qualitative, and mixed research. And there are often no clear boundaries between types of scientific research. The research method is continuous and different research approaches are always involved in it (Mohammadpur, 2018: 31). In this article, the research method is presented in the form of visual approaches and placement of each component and sub-component in all three

types of tissue (intermediate tissue, new tissue, and old tissue), and the quantitative section, the evaluation of the questionnaire based on the opinions of experts is discussed. In this section, the Kolmogorov-Smirnov test is used to evaluate and rank the three ranges based on Friedman's tradition theory. The statistical population of this research is all professors who have opinions in this field and the sampling method is snowball. In the snowball sampling method, first one or more samples of the target are identified and they are asked to introduce similar people to the researcher. In fact, in this method, it is possible to access more samples through each sample. This process continues until the desired volume is reached. In this research, the maximum sample was used to introduce more samples, which led to the repetition of previous samples, and the sample size in this research is 50 people. Qazvin is a province in the northwest of Iran, which is located approximately 150 km west of Tehran. Its area is 15,549 square kilometers and it has a population of about 1.2 million people, and has three regions. The study area of the current research is located in the second and one area of Qazvin Municipality, which is Khayyam Street located in the central part of Qazvin city. Shahid Modares Boulevard is to the east and parallel to Ferdowsi Street to the west. Khayyam route is divided into three parts by Rahdari and Buali axis.

The first part: the southern part of the axis, the border between Taleghani and the municipality, is 240 meters long and 19 to 22 meters wide. This section includes commercial, commercial-service, administrative, therapeutic, educational, and welfare uses.

The second part: the central part, between Shahr-dari Street and Buali Street, is 290 meters long and 19-22 meters wide and includes commercial, commercial-service, administrative, educational and welfare, sports, religious, and health uses.

The third part: the northern part of the designed route, between Buali Street and Adel Street, is 320 meters long and 17-20 meters wide and includes commercial, commercial-service, medical, administrative, and welfare uses.

**DISCOUSION AND FINDINGS**

In this section, the scope of the case study is discussed based on the various components in Richard Sennette's open city theory. This section has two stages, i.e. the first stage of visual approaches (checking the position of each component with its sub-components within the scope of the study case) and the second stage is the evaluation of these components in the framework of the questionnaire based on the opinions of experts. The important point in this direction is the selection of people who have sufficient information about the research topic and have a relatively good understanding of the target area. In this regard, first, the normal distribution of the data is examined, and then the classification of each range of Khayyam from different points of view.

*Visual approaches of the study area*

In this section, a variety of different perspectives are discussed in Richard Sennette's open city theory. In this section, an attempt has been made to investigate the effective components of tradition in the urban space of Khayyam, and four main components are analyzed and investigated through three maps.

In Map 2, an attempt has been made to analyze the democratic space from the point of view of tradition. The sub-components of this component in the classification of immigrants and their dispersion are within the scope of the research, which according to the evidence, the highest dispersion of immigrants is in South Khayyam. Another sub-component is dependence on place, which seems to be more depen-

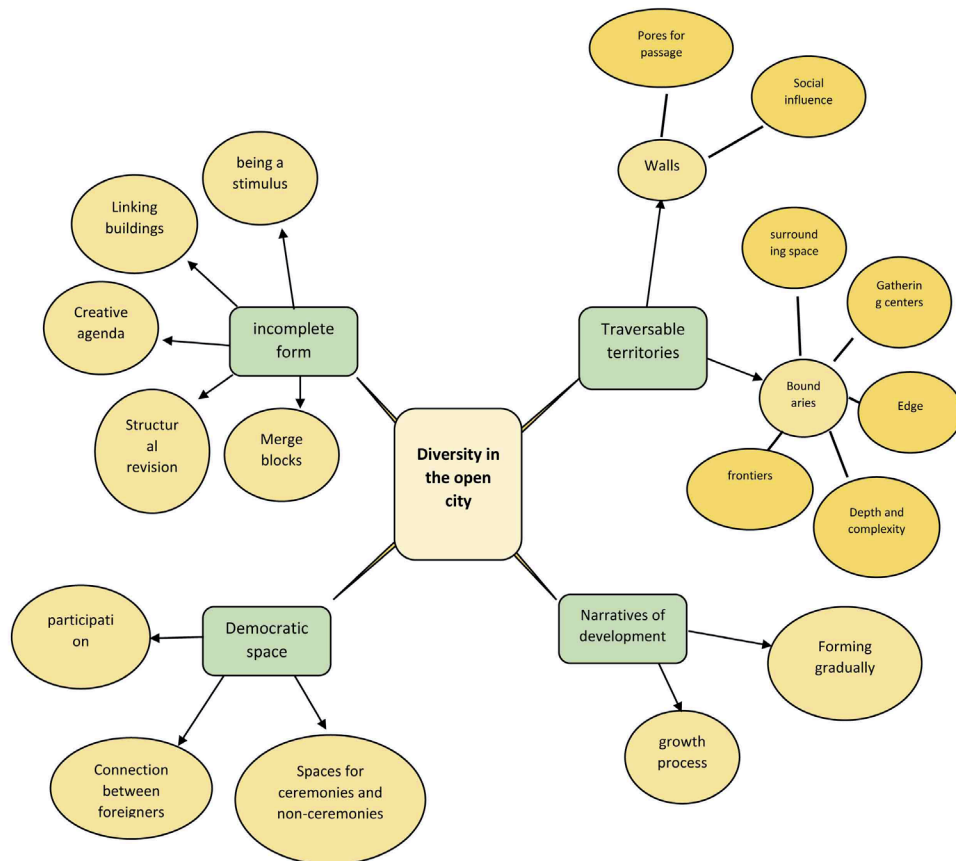
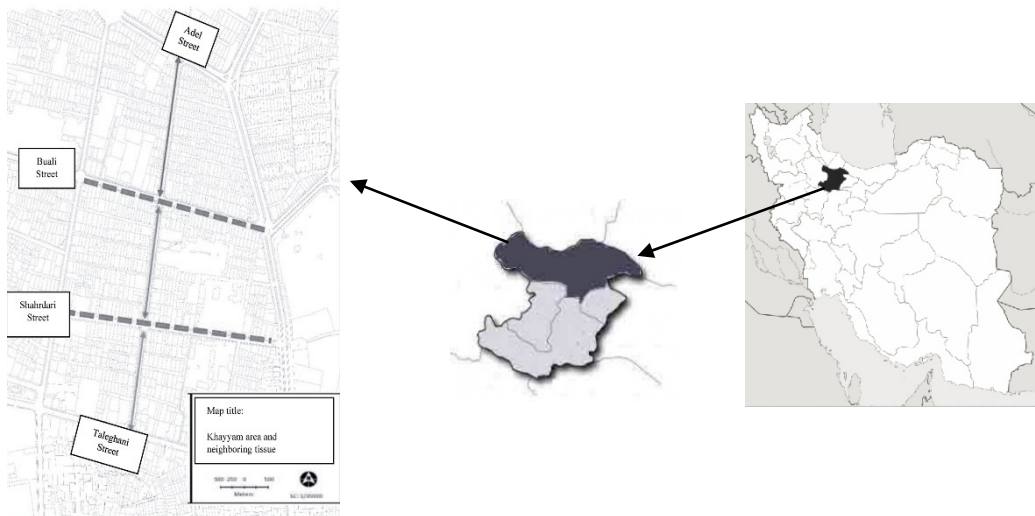


Diagram 2: Diversity in the open city of Richard Sennette





Map 1: Study area



Map 2: Democratic spaces of Khayyam Qazvin region

dent on place in Southern Khayyam, then Middle Khayyam, and finally Northern Khayyam. Regarding the holding of ceremonies, it is mostly in Southern Khayyam, in a part of Middle Khayyam, and finally at the end of Northern Khayyam, but in general, the center of holding these ceremonies is often in Southern Khayyam. Concerning the sub-components of various uses, often in Northern Khayyam, this variety is more than the other two Khayyam, therefore, to the use and functionality of Khayyam Northern, it has more variety than other centers. Regarding the interactions, it can be acknowledged that the interactions along the way are formed

at points that have a pause space and the possibility of exchanging opinions and discussions. And finally, the participation of citizens, which is considered one of the main sub-components in Sennette's theory, has been considered in the formation and development of Khayyam by the presenters of topical and thematic plans, and users and experts have been used. Two other components of tradition theory are related to narratives of development and incomplete form, which were studied and investigated in the area of Khayyam Qazvin and on the map. In total, seven sub-components of these two components are displayed on the map.



Map 3: Narratives of development and incomplete form in Khayyam Qazvin area

The functions and creation of diversity in the urban space of the Khayyam region are visible in North Khayyam more than in the other two Khayyam sections in the region. And concerning the sub-component of conflict and heterogeneity, it is seen more in Southern Khayyam, then in Northern Khayyam, and finally in Middle Khayyam. Regarding the sub-component of visual creativity, it can be acknowledged that due to visual arts and attractive spaces created in the middle of Northern Khayyam road, the highest level of visual creativity, followed by Middle Khayyam and finally Southern Khayyam benefit from creativity. Regarding the possibility of changing the space, first in Southern Khayyam and then in Northern Khayyam, it is more possible than in Middle Khayyam (**except for the educational centers in Southern Khayyam**). Special forms in design are also mostly available in Northern Khayyam, and this work is done with visual arts, creating variety in color and light, etc. In this range, more than two other ranges can be seen, and finally, concerning the distinctive texture, it can be said that the integration of the new texture with the old is more uncoordinated in Southern Khayyam, and this is much more evident than in Middle and Northern Khayyam.

Map 4 is related to passable territories in the Khayyam range, in which seven sub-components have been analyzed, and the important point is to consider social and perceptual factors. The component of traversable territories in the theory of tradition concerning social life states that what spaces within the boundaries strengthen this life during the day and night, and according to the existing uses in the range of uses such as cafes, it strengthens the nightlife, which is classified in the northern Khayyam, then in the Middle Khayyam, and finally in the Southern Khayyam. The next sub-component is the drive to pass and enter, which depends on the type of environmental plans and the type of uses, etc., it can encourage people to believe that Northern Khayyam is more than the other two Khayyam sections in this matter. According

to the dimensions of the buildings and the type of blocks, the peripheral visibility in Northern Khayyam is greater than the other two Khayyam sections. The inhibiting role of space is also due to various reasons such as lack of perception or lack of sense of security, etc., according to the research, the Southern Khayyam has more space than the other two Khayyam sections, and then the Middle Khayyam due to the single use of parts of the Middle Khayyam. The organic and diverse tissue as well as the depth and complexity are more than the Northern Khayyam due to the old tissue of the Southern Khayyam, and then the Middle Khayyam is in the second place of this sub-component, and finally, the interaction is more visible in the demarcation of spaces in the Northern Khayyam and also in the points between the Northern and middle Khayyam.

*6-2 Quantitative part in the review of the experts' questionnaire*

This table, which is dedicated to the Kolmogorov-Smirnov test; This test compares the observed cumulative distribution function with the theoretical (expected) cumulative distribution function of a quantitative variable. In other words, in this test, the distribution of a trait in a sample is compared with the distribution considered for it in the society. If the significance level in this test is greater than 0.05, it can be concluded that the distribution is normal. If the significance level in this test is greater than 0.05, it can be concluded that the distribution is normal, and parametric tests should be used in the research, and if it is smaller than 0.05, it can be concluded that the distribution is not normal and non-parametric tests should be used in the research.

Variables	Significance level of Kolmogorov-Smirnov test	Test result
Northern Khayyam	0.09	Normal distribution of data
Middle Khayyam	0.11	Normal distribution of data
Southern Khayyam	0.14	Normal distribution of data

According to the above test and the significance levels of all variables, which are greater than 0.05, it can be concluded that all variables follow the normal distribution and parametric tests should be used in this research. The Friedman test is a test that is used to compare three or more dependent groups that are measured at a quantitative level. This test can also be used for continuous data (*interval or relative*), but their ranking is also considered when calculating these data. According to the results of the Friedman test in ranking the theory of tradition

in the three study areas of Qazvin city (*Northern Khayyam, Middle Khayyam, Southern Khayyam*), because the value of the significance level is equal to 0.0001 and it is smaller than the standard error level of 0.05. It can be concluded that the average acquisition rank of each of the study areas of Qazvin city (*Northern Khayyam, Middle Khayyam, Southern Khayyam*) is significantly different from each other. The ranking of the three study areas of Qazvin city, from the highest to the lowest, are: 1. the Northern Khayyam, 2. the Middle Khayyam, the Southern Khayyam



Map 4: passable territories of the Khayyam Qazvin area



**CONCLUSION AND RESULTS**

Cities are inherently diverse and complex. Such a nature reaches its peak when the tissue evolves over time and becomes objective. So, the presence of different strata and groups in an urban space of any spectrum of age, race, cultural and economic classes, etc., along with their diverse demands and needs, increases the intensity of this type of diversity. In this research, an attempt has been made to analyze the diversity of the urban space of Khayyam Qazvin based on three types of environmental structures based on Richard Sennette’s theory. In his theory, Richard Sennette examines traversable territories, incomplete form, narratives of development and democratic spaces. Based on this theory, the visual approaches of the range in these four components are examined schematically, and then it examines it through a questionnaire in such a way that the mentioned components and sub-components are analyzed by experts in the scope of the study case, based on the answers received from Khayyam North, then Khayyam Middle, and finally Khayyam South, respectively. The reason for this is the great diversity in the type of physical structures and spatial perception in the Northern Khayyam region, and in the Middle Khayyam region, the diversity has been

minimized due to the single use of the space, and in Southern Khayyam, due to the types of uses such as educational and administrative, and the space remaining unused in parts of the day, the diversity and complexity of the space decreases, so that in the section on visual approaches with the results obtained from each component and its sub-components, this result can be achieved. In general, for the four main components mentioned in the theory of tradition, it can be acknowledged that in some components, such as the dispersion of immigrants, the component of democratic spaces in South Khayyam has the highest dispersion of immigrants. In the other main component, under the title of development narratives and incomplete form, sub-components such as functions and creation of diversity in the urban space of Khayyam region, in Northern Khayyam, more than the other two Khayyam sections in the region can be seen, and concerning the sub-component of visual creativity, it can be acknowledged that due to the visual arts and attractive spaces created in the middle of Northern Khayyam Road, the highest amount of visual creativity, then Middle Khayyam and finally Southern Khayyam benefit from creativity. And finally, regarding the component of traversable territories in the theory of

**Table 2:** Friedman’s test to rank the theory of tradition in the three study areas of Qazvin city (North Khayyam, Middle Khayyam, South Khayyam)

Three study areas of Qazvin city	The average rating of the components	The final rank of the range
Northern Khayyam	2.58	1
Middle Khayyam	2	2
Southern Khayyam	1.42	3
Number	50	
Chi-square value	85	
Degrees of freedom	2	
The significance level of Friedman’s test	0.0001	
Test result	There is a significant difference between the ranks of the ranges	



tradition, with a sub-component such as social life, it can be said that what spaces in the range strengthen this life during the day and night, and according to the existing uses in the range of uses such as cafes, it strengthens the nightlife, which is classified in the northern Khayyam, then in the middle Khayyam, and finally in the southern Khayyam. Finally, according to the answers received, according to the four main components of Sennette and more than twenty sub-components, Khayyam North has the most diversity in most of the mentioned cases.

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