Journal of History Culture and Art Research (ISSN: 2147-0626)

Special Issue

Tarih Kültür ve Sanat Araştırmaları Dergisi

Revue des Recherches en Histoire Culture et Art

مجلة البحوث التاريخية والثقافية والفنية

Vol. 6, No. 1, February 2017

http://kutaksam.karabuk.edu.tr

DOI: 10.7596/taksad.v6i1.751

Citation: Hanif, E., Hashemnejad, H., & Ghafourian, M. (2017). Factors Affecting the Augmentation of Spatial Dynamics in Social Sustainability with an Emphasis on Human-Orientation of Space. Journal of History Culture and Art Research, 6(1), 419-435. doi:http://dx.doi.org/10.7596/taksad.v6i1.751

Factors Affecting the Augmentation of Spatial Dynamics in Social Sustainability with an Emphasis on Human-Orientation of Space

Ehsan Hanif*[1], Hashem Hashemnejad[2], Mitra Ghafourian[3]

Abstract

A place can be considered as sustainable place that meets current needs of human and considers their needs in future. Spatial dynamicity is also one of the indices of a sustainable space, which defined the relationship of space with variable needs of human. Spatial dynamicity is an index, through which space matches itself by changes in human life over the time. In other words, special dynamicity is a quality of a space, through which space is matched with changed needs of humans through changing itself. Therefore, in regard with space dynamicity and place stability, human needs are prior to other needs. This is because; in fact meeting the needs causes more social participation of people and increase in their social interactions. However, at the current world and after expansion of modernism approach, increase in attention to vehicles and their presence has decreased direct consideration of variable needs of human and their presence in space. Hence, it could be mentioned that today, presence of vehicles in space has created a big challenge for dynamicity of space. Meeting such challenge is important, since a human-oriented dynamic space can increase human interactions and can also promote place sustainability and make using space possible over the time. This study adopts a qualitative-analytical approach to find factors that can form a sustainable space through strengthening the dynamics of space and increasing level of social interactions. Findings indicate that in regard with creating any kind of change in space, in addition to consider future, past of the place should be also considered. This study has found that human scale in an important factor in this framework and considering future. Moreover, in regard with past and emphasizing effect of place on human, historical memory of space should be considered and with emphasizing effect of human on place, collective memory factor should be considered. Accordingly, through assessment of each factor, a series of strategies should be achieved based on future and a series of expected results should be achieved based on past, so that framework of a change can be specified in limit of space dynamics index.

Keywords: Spatial dynamicity, Human scale, Space historical memory, Collective memory.

[1]Corresponding Author. MSc in Architecture, School of Architecture and Environmental Design, Iran University of Science and Technology, Tehran, Iran.

[2] Associate Professor, School of Architecture and Environmental Design, Iran University of Science and Technology, Tehran, Iran.

[3] Assistant Professor, School of Architecture and Environmental Design, Iran University of Science and Technology, Tehran, Iran.

Introduction

Human don't go forward at the same time by all needs. In a time, only one need is dominant. This issue that what is need depends on what series of other needs have been satisfied previously (Karimi, 1995: 156). Human needs change over the time. As a result of change in needs, environmental functions would be changed. This is because, environmental function is a function of human needs and as a result, changes in functions can result in change in physics (Sultani and Khodaparast, 2010). Although finding patterns of the changes is helpful, in order to achieve a space with maximum efficiency and sustainability, one should restrict changes in certain framework for survival of space and more tendencies of audiences to continue activity in space. The issue that what space and physic meets such goal is an issue that should be studied in detail.

After expansion of modernism approach in architecture, vehicle and machinery view in physical sizes and dimensions and in type of spaces have dominated space of cities. After that the disadvantages of this view were appeared, attention to human presence and physical and spiritual scale of human became important. Bacon has studied the method of design and growth of urban spaces and recognition of effective energies in combination of city and has found that if the designer wants to have a design guaranteeing unity and integration and don't be destroyed over the time and become more powerful, presentation of public aspect of urban structure is enough (Bacon, 1974). Therefore, the main issue here to create a dynamic space is considering interaction of human and city against the interaction of vehicle with city. Therefore, in comparison of human and vehicle, framework of discussion can be specified. Moreover, as the study is aimed in achieving a sustainable space, the comparison should be done according to social life and problems with modern approach in domain of social life.

After the rise of modernism approach in architecture, the cities were dominated and affected gradually with presence of vehicles. Hence, presence of human in space was declined. As a result of decrease in human presence in space, human interaction level was also declined. However, gradually with appearance of hedges of this attitude, attention to human presence in space became important. The concept of sustainable space was formed and certain indices were determined for it. One of these indices is space dynamic index. Spatial dynamicity means that a space changes itself in regard with facing change in human needs to meet them. Although the index has been defined in many sources as one of the features of a sustainable space, still no certain framework is codified for it. In this study, the aim is to codify a clear framework for spatial dynamicity index and present several samples of Iranian architecture in

this framework to achieve a clear definition of spatial dynamicity to be able to achieve a sustainable space with spatial dynamicity index.

1. Literature review

The word "sustainable" is applied widely for purpose of describing a world, where human and natural systems can continue their life with each other till long future. Sustainable development means presentation of solutions against technical, physical, social and economic patterns of development that can prevent issues such as destruction of natural resources; destruction of biological systems; global pollution; climate change; uncontrolled population increase; injustice and poor quality of life of human beings (Khanmohammadi, 2009). Emergence of the concept of sustainability by 1970s can be considered as a result of logical growth of new awareness about global issues of environment and development, which can typically be affected by factors like environmental movements of 60s and publishing books including Growth Restrictions and First UN Conference on Environment and Development held in Stockholm by 1972.

According to Donald Vorster, combined term of "sustainable development" has been appeared for the first time by 1980 in world protection strategy (Vorster, 2008); although sustainability in expanded form was presented in report of Brundtland under the title of our common future by 1987. In this report, considering concept of present and future needs, restrictions of development and growth capacities and ability of environment in meeting needs were investigated. After that, report of Brundtland became base and foundation of conference of environment and global development (UNO) hold in Rio by 192 and agenda of 21 with orientation of sustainable development was one of the achievements of the conference. Moreover, abundant articles were published by 1990 on sustainability including Redesign for Sustainable Development written by John Lyse and an Introduction on Sustainable Development published by Rocky Mountains Institute.

Goals of sustainable development have been studied in three social, economic and environmental aspects and among them, social aspect is considered less than other aspects, since it is a series of mental concepts. However, social sustainability has been studied sometimes indirectly and under issues like sense of place, collaborative partnership and security of social centers and sometimes, some people have taken action to make the issue clearer through presenting certain indices. In British Columbia Roundtable (193), some goals

were defined for social sustainability. After that, different people tried to determine some indices for social sustainability according to goals of social sustainability. One of the indices that are generalized among scholars is spatial dynamicity. Although the index is considered as an important index in regard with social sustainability, still no certain framework is existed for its definition. Therefore, the study has emphasized human presence instead of presence of vehicle in space to present framework of space dynamicity and to investigate samples of Iranian architecture in the framework.

Table 1: Indices of sustainable development

	Main goals	**Most important indices**
Sustainable development	Social	Spatial dynamicity, spatial security, diversity, identity and liveliness, collaborative partnership
	Economic	
	Environmental	

Source: authors

2. Methodology

The present study has been conducted using library method and has searched firstly indices of presented theory in field of human-space interaction in city and has analyzed them. Qualitative- descriptive method has been applied to investigate existing state and main form of urban areas in Iran. Through adapting theory with action and presenting certain definition of spatial dynamicity, the study has specified framework of a sustainable change to achieve a sustainable dynamic space through restricting factors in this framework.

3. Discussion

In the discussion of difference between human-space interaction and vehicle-space interaction, how to make human-space interaction against vehicle-space interaction should be considered. In regard with space-vehicle interaction, it should be mentioned that because of speed of vehicle movement in space and also large scale of space in relation with vehicle, spatial differences have been removed. It means that a point of city was not different with

other point, since certainly of space have lost its importance because of high speed of vehicle movement. On the contrary, the more a space addresses human and communicates people and the more meets desires and expectations of human, the more sense of belonging would be created in human by the space. Rapaport has considered basis of humanitarian approach to space perception as dynamic collections of scenes. In his opinion, scene is a limit of space that encompasses a system of activities, so that behaviors can create desirable relations with internal environment of the space (Rapaport, 1999). Therefore, any kind of scene can be considered as a place with special activity. The mentioned activity places behaviors in time/space frames. It means that it places them in simple or combined form in frame of special chains on certain points of space and sequences the points in special form in terms of time (Sultani and Khodaparast, 2010). Therefore, human behavior inside space can differentiate human-space interaction from vehicle-space interaction. Therefore, in order to recognize dynamicity of space, variable human behaviors should be recognized. In this regard, it could be mentioned that desirable natural adaptability provides better survival of some creatures than other ones (Lang, 1987). Simply saying, the more the amount of adaptability of space with human needs is, the more human presence in the space would be. Hence, in addition to recognition of fixed and variable behaviors of human over the history, those places should be also recognized that create potential capability to create the behaviors. In other words, spatial features of the space that provide conditions for human behaviors should be also investigated along with the human behaviors. On the other hand, one can't prevent vehicles from entering to city and as a result, many changes at the current world are irrevocable; although it should be tried to make the changes in direction of enhancement of human presence. Therefore, the study has been adopted according to human-space interaction, along with presence of vehicle but emphasizing role of human in space and has studied space dynamics in 3 sections. The first section considers future as human scale; second part considers past time and has emphasis on effect of place on human under title of place historical memory and third section considers past and has emphasis on effect of human on place under the title of collective memory. The 3 sections include items that should be observed by any kind of change in space to be a dynamic change. In continue, in addition to describe each section due to the current conditions of human society and through presenting examples of Iranian architecture, importance and applicability of each section is emphasized.

4.1. Humans scale

The aim by human scale here is not focusing attention only on measurable dimensions of space, but also the aim is all features of a space that human owns the space in facing them. It means that humans feel that the space is built for them. Although the features include measurable dimensions of space, they also include other features that can lead to human-orientation of city. The features are not only defined in conflict with existing status of cities, but also they become meaningful in same framework. For further understanding of the concept, here the concept of human scale would be expanded.

With entrance of vehicle to city, the first event was change in city scale. In this change, scale of sidewalks and traditional alleys was changed into street. Today, activities in streets are being considered as the most collective urban space. Appleyard et. al, in their book "Livable Streets" have defined street as the most important urban section. According to them we should enhance our vision for the current age. A residential street is the street, where our children grow up, adults live and elderly people pass their last moments of their life (1981). Hence, in regard with future, street as a social space should be in such manner that all social behaviors can be formed in it easily and it can supply physical and spiritual dimensions of human. In other words, street should be human-oriented. Jacobs has defined the term for the first time. According to the definition, the aim by designing human-oriented spaces, creation of streets and squares is to make citizens feel higher level of security, more efficiency and increasing liveliness. The aim can be met through facilitating control of citizen on the space (Hanley and Garrick, 2010). In order to achieve this goal, some criteria have been presented that can be classified according to 3 components including functional, empirical-aesthetics and environmental components. The classification has been proposed based on Sustainable Place Model of Golkar Kurosh obtained from combination of 4 dimensions of the environment including physic, activity, imaginations and ecosystem (Sultani and Khodaparast, 2010). In this case, one can refer to urban streets of Tehran, where commercial activities are centralized. Moreover, existence of attractions including natural elements can also lead to empowerment of presence of humans. For example, in Somaye Street in Shiraz, existence of Azadi Park and green spaces is one of the main reasons for residents to gather together. Moreover, existence of Babakuhi Mountain, Azadi Park and old trees in margin of the street and dominance of natural elements like green space and urban fabric can have different effects on view and landscape of Somayeh Street (Sultani and Khodaparast, 2010). Therefore, in the current architecture framework and according to existence of streets, urban structures should be

created in such a manner that they can guarantee human presence in space and formation of social behavior in the space to attract more people to the space through enhancement of environmental qualities.

In addition to the general principles affecting increase in human presence in space, some strategies have been also presented according to the current structure of cities and considering future. The strategies accept presence of vehicle at the current cities and emphasize decrease in presence of vehicle and increase in human presence. Moreover, in addition to considering social criteria of sustainability, the issue is also considered in two environmental and economic dimensions. In continue, 3 strategies are presented considering space dynamics.

4.2. Presented strategies

a. Pedestrian-orientation

Pedestrian-orientation is important, since people gain high perception of the environment in interaction with the surrounding area and in a humans scale and can cope with the environment. As a result, they can show behaviors that are more sustainable against space. For the issue, spatial features have been considered including creation of attractive complex for pedestrians through designation, scaling, quality of buildings, streets and urban landscape (CANPZD, 2006), considering direction of buildings, entrances and openings (direction of buildings should be toward streets with least barriers or with no barrier), designation sue to climate (embedding canopy and barrier against wind, rainfall and sun) and good connection of streets (Behzadfar and Zabihi, 2011). Moreover, as social interaction can be a physical issue, a look or a conversation or contact (Daneshpoor and Charkhchian, 2007), pedestrian-orientation and expansion of presence of pedestrians can help increase in social interactions.

b. Public transportation (transit)

The factor is in second degree of importance to make a street human-centered. For example, Calthrope has defined transit-based development as follows: a district with various uses in an average distance of walking to 2000ft (10min) from a public transport station or commercial center (Calthrope, 1993). Moreover, components of penetration and effective access, along with effective functional qualities of space, can affect enhancement of social activities (Behzadfar and Tahmasebi, 2013).

Considering these issues may seem enough, but they can't be final outcome. This is because; it should considered in definition of transportation-based development that in addition to centralization of physical and quantitative criteria of space like functional quality, capacity and penetration and services of public transportation system and connection of streets, qualitative criteria of spaces should be also considered. In this regard, transportation-based development refers to a kind of development that follows 7 qualitative goals as follows: 1) place efficiency in view of congestion, access and pedestrian-orientation 2) rich combination of choices for types of accommodation options and possibility of various activities for al social classes 3) realization of social, economic and environmental values in place 4) creation of place according to principle of designation for people to improve existing situation 5) solving stresses and tensions between node and place including tension between function of a station in communication, working with land view, mixed uses and capital management 6) solving tension between node and place including tension between function of a station as a node in regional transportation network and its role as a place in district (Dittmar and Poticha, 2004) 7) promoting biocompatibility to guarantee improvement of air quality through reducing fossil fuel consumption, increase in displacement options, increase in access to retail centers, servicing centers, entertainment centers, parks and public spaces and also social health and more social and economic security (Belzer and Autler, 2002).

c. Combination and mix of uses

In addition to the mentioned options, one of the basic components in transit-based development and pedestrian-based development is paying attention to mixed use. Combination of residential uses can facilitate retail, administrative use, open spaces ad public uses in a pedestrian-based place, using public transportation, bicycle riding, walking and vehicles for residents and employees in regional domain (Calthrope, 1993). Combination and mix of uses can result in attraction of pedestrians and it can make trips internalized through making source and destiny close to each other (Behzadfar and Zabihi, 2011). This action is important, since can reduce movements and need to vehicles and that people indicate more sustainable behavior with their presence in their living place. In fact, combination of uses is a strategy that guarantees presence of people within the neighborhood to help two other strategies including pedestrian-based and transit-based development. Hence, it could be mentioned that strategy of combining uses can complement two other strategies and without supplying each of them, a deficit would be existed in the process.

Combination of uses is in three forms of vertical, horizontal and functional based on work-residence. Vertical combination of the uses is localization of different uses in stories of a building. In this regard, one of the different types of common combinations is placement of commercial use (like retail) in flat story and residential or administrative use in high stories of a building (Behzadfar and Zabihi, 2011). Horizontal combination includes placement of adaptable uses in line with each other in adjacent sections or in a single section. For example, a commercial use is located in side of street and linked residential use is in back section. Work-residence units are also units with the capability that their residents use the residential place as work office, workshop, studio or gallery or any other use related to working (Community Design + Architecture, 2001: ch.5). Combination of uses in these cases is done with the aim that people can go shorter distance from home to work in addition to be present in their living area during their working hours. Therefore, through this, in addition to considering two strategies of pedestrian-orientation and transit-orientation in framework of spatial dynamics, other indices of the concept like security and identity would be also empowered according to more common concept of social sustainability.

However, an issue that should be considered in all of these cases is that usually location of uses with activities in traffic axis is inadequate in adjacent section of street (Greenberg, 2004). Moreover, in model of vertical combination of uses, it should be noted that commercial use in flat story should not be in a type to surround rigid walls. In this case, it would be better to drag resolution from outside of use inside, so that activity in sidewalks can be attractive. In addition, creating diversity in street margin uses is also important in this domain (Community Design + Architecture, 2001: ch.5). In general, it could be mentioned that according to different conditions, combination of uses should be in a manner that it can guarantee maximum presence of residents, along with people out of the area and in social activities.

Table 2: Presented strategies according to human scale factor

Presented strategies according to human scale factor	Considered goals in pedestrian-based framework	To create attractive collection for pedestrians through designation
		Scale and quality of buildings
		Streets and urban landscape
		Considering direction of buildings, entrances and openings
		Designing based on climatic conditions

		Good connection of streets	
	Considered goals in public transportation framework	Quantitative criteria	Desirable distance with transportation centers
			Congestion and penetration
			Effective functional qualities of space
		Qualitative criteria	Place efficiency in view of congestion and access
			Rich combination of choices for all classes
			Realization of social, economic and environmental values
			Creation of space to improve existing conditions
			Solving tension between node and space
			Solving regional and urban tension of node
			Improvement of air quality
Mixed uses		Horizontal, vertical combination and workplace-home combination in uses	

Source: authors

4.3. Historical memory of place

According to Calvino, the thing that gives existence to the city is associated with relationships between size of spaces and past events. City can't talk about its past and has some picture of it like the lines on the palm. The past is formed in corner and side of streets (Calvino, 2002). In other words, history of city makes its present life. The more the relationship of city history with human is, the more human-centered it would be. City and time are correlated to each other and they complement their meaning in this relationship. The attachment between city and time can form concept of place historical memory or place memories. As memory is along with remembering, temporary nature and change can be also sign of lack of existence of memory in city (Mirmoghtadayi, 2009). In an interpretation of Rem Koolhaas, a city with uncertain and ambiguous memories has lost its history. The city that is generic city according to Rem Koolhaas is a temporary city (Koolhaas, 2000). Therefore, place historical memory or place memory is a quality in regard with effect of physic on human. The quality refers to

presence of place overt the time, so that the presence can occur along with human presence. The presence and human life and place, along with each other and emphasizing relationship of effect of physic on human, can form place historical memory over the time in mind of humans, so that people can remember features and characteristics of a place when facing the place. As memories make human life meaningful and direct its time and space dimensions (Siew-Wai Lim, 2000), lack of memories of place make life dead i.e. human presence would be declined in a space without historical memory. Hence, according to principle of place historical memory and spatial dynamics, any kind of change in present physic should be created according to place historical memory and lack of damaging place memory.

However, despite the mentioned issues, today changing fabrics out of sustainability framework has today resulted in destruction of spaces regardless of sensory features of space. In this field, one can refer to a lot of examples like Sirus Road Construction (Mostafa Khomeini) of Tehran on passage of market that has caused cut of fabric of neighborhoods and hence, Udlajan has been divided to two parts. According to a source, it has been imagined to clean past time and form new present time; although the present is not existed and nothing can maintain the historical continuity and subjectivity. In other words, with collapse and destruction of each corner and wall in city, a part of minds of people would be collapsed and minds of citizens would be confused. This is because; source places are destroyed. Source and original place is not a sign for sure, but also it can be mental or imaginary (Habibi, 2004). All of the mentioned issues can occur under such conditions that old neighborhood centers of Tehran display eastern dimension of urban spaces where have been interaction place of old residents of the city. Khani Abad neighborhood is one of these neighborhoods. The district that is structurally similar to other neighborhoods of Tehran has active public places that have been the place for social interactions of residents. The spaces include gardens, squares, mosques, bath, bazaar, tea, barbecue, gymnasium and shrines. Each of the said places has had specific role in social life of the neighborhood. On the contrary, new districts of city (like Narmak, Koye Nasr, Yusef Abad, Ekbatan and Shahrake Qods, etc) have different spatial structure. In these districts, there are public places like parks, shopping centers, coffee shops or coffee nets and are based on servicing radios and presence of residents of the district or other districts. Studies in district of Koye Nasr (Gisha) indicate that different social classes (youths, women and retired men) are present in their regional hangouts in different hours of the day for different reasons (Mirmoghtadayi, 2009). Hence, creating a place is beyond physical definition and considering physical dimensions of a space. Place is a historical

domain, which creates possibility of taking place of an activity in it. Schultz has also referred to the word "taking place" in regard with place, which is mixed with the term place in English. In his opinion, human identity and place identity are interdependent. Having a common place refers to having common identity and sense of belonging to a group (Schultz, 2003). Hence, it could be mentioned that in addition to human scale feature that considers physical and mental dimensions of space in regard with human, place historical memory or place memory is important, since it presents an image of continuity of human life in place. Moreover, the more change in a space is match with place historical memory, the closer the change would be to spatial dynamicity framework.

Undesirable example: Sirus Street (Imam Khomeini) Tehran

Desirable example: Khani Abad

Table 3. Historical memory of place: place memory

Quality related to relationship of city with its past emphasizing effect of physic on human in spatial dynamics framework	Place historical memory (place memory)	Effects of paying attention to quality of place historical memory in human-city interaction
		Formation of memory of place
		Place continuity in time
		Sustainable behaviors in human in space

Source: authors

4.4. Collective memory

Human uses speaking or writing to transfer things in their minds to their congeners. Although human language is full of symbols, they use some codes and symbols in some cases. Although these codes have no meaning by themselves, they have become meaningful in our view because of their wide use or they have become meaningful by doubt of human (Jung, 2013). Therefore, two points can be found about codes: they have found their meaning over the time and codes may be different in different societies, since every society has its own history. On the other hand, symbolism history indicates that everything can gain symbolic meaning like natural or manmade objects or evolutional forms are actually potential symbols

(Jung, 2013). Hence, in order to achieve relevant symbols and concepts in every society, a comprehensive study about surrounding area of a society is required. From physic to literary proses and cultural products of a society can be helpful in achieving to their proper codes and meanings. According to Kevin Lynch, symbols can cause readability through creating difference in objects and behaviors and subjectivities. It can also change scene into stable, semi-stable or dynamic form (Lynch, 1995). Henri Lefebvre has also considered space not a natural phenomenon, but a historical integrity and a social production in regard with discussing on space production. In fact, space is historical memory of human on one hand and is experience of human daily life on the other hand (Fokuhi, 2004). Hence, it should be mentioned that through coding and defining each space compared to other space and through differentiating spaces, a memory of space can be created. The memory is formed over the time. A part of the memories is result of individual relationship of a person with space; meaning that a memory of a day or a period of time is formed in mind of person that can cause attachment of person to the place. This type of memory is same type that was explained under the title of place memory. However, the other part of memories can be formed as a result of a collective event. If person was important in type 1, here population and collection is important. In other words, the first group of memories is result of effect of place on human and second group is result of effect of human on place. The second type of memory is interpreted as collective memory.

The concept of collective memory has been presented for the first time by French Sociologist Emilia Time. The sociologist has described the concept as follows: collective life continues over the history and is not temporary and the sense existed in all people or majority of social members is named collective memory. The issue that creates sense of belonging and identity of a society in people is not absolutely intentional phenomenon, but also it has unintentional aspect. The phenomenon is induced to person during the time and lifetime and internalizes this sense in human and creates behavioral patterns in heart of the society on this basis. Social identity and collective memory can be preserved, where people feel that the place of their life is different from other places (Khavar, 2004). Historical memory of city means that city has memory and described what happened in this place. In addition to memory, city should have memory in relation with people. Hence, as human can be defined by memory, city is also defined by memory (Habibi, 2005). In other words, when speaking on collective memory of city, places are discussed where urban memory has function and urban events have been took place. The urban events have given historical thickness to city and have become a component

of historical memory and personal memories (Fadayinejad and Karampoor, 2009). The historical memory is derived from all historical events took place in a space; although the feature that makes some of them stick in mind is their humanitarian nature. It means that human presence can define them. For example, when passing the street with speed of a car, no imagination and picture of the street can be remained in mind of human, since person has not been in contact with the space. However, in cases that people form space and are involved in it, historical memory of place would remain for person. These behaviors that can result in empowerment of place in Iran include holding religious ceremonies and the most important days are related to Moharram Days and national celebrations and traditions like shopping for New Year, Chaharshanbe Suri and so on. In cases that national victories, celebrations and happy ceremonies have created a street, the place can be perceived from its relationship with memories of people about an event. For example, in this case, one can refer to Azadi Square, which has been always one of the centers for human gatherings. In case of Iranian Ancient Architecture, one can refer to Pole Khajoo in Isfahan, which reminds memory of singing of people under its arches.

Table 4. Historical memory of place: collective memory

Quality related to relationship of city with its past emphasizing effect of physic on human in spatial dynamics framework	Collective memory	Effects of paying attention to quality of collective memory in human-city interaction
		Sense of space differentiation in person
		Formation of spatial identity

Source: authors

5. Conclusion

To create change in a place in framework of spatial dynamicity index, two orientations should be considered: first, toward future and its desirable relation with human in future and toward past time of place and its correlation with human. In regard with attitude to future, 3 components should be considered including functional components, empirical-aesthetics and environmental components. Moreover, 3 groups of strategies should be generally considered

including pedestrian-orientation, public transportation and mixed uses. However, in regard with attitude to past, required qualities of attention can be divided to two groups of qualities resulted from effect of physic on human and qualities resulted from effect of human on physic. Qualities of first group can be defined as place historical memory and qualities of second group can be defined as collective memory. In addition, it should be mentioned that considering place historical memory can result in 3 important effects including formation of memory of place, continuity of place over the time and sustainable behavior of human. Moreover, paying attention to quality of place memory can lead to two effects of spatial difference in individuals and formation of spatial identity. In general, it should be mentioned that any kind of required change in the place should be created through considering future and importance of preserving identity and memory of place over the time.

References

Appelyard, D., Gerson, M. S. & Lintell, M. (1981). Livable Streets. Berkeley, CA: University of California Press.

Bacon, Edmund (1974). Urban design: the transformation of the city from ancient Athens to modern Brasilia. Trans. Farzaneh Taheri. Tehran: Research and Studies Center of Planning and Architecture.

Behzadfar, M. & Tahmasebi, A. (2013). Identification and assessment of factors influencing social interactions to strengthen and develop relations between the citizens on the streets of the city: the case study of Sanandaj. Baghe Nazar, (25): 17-28.

Behzadfar, M. & Zabihi, M. (2011). Program guide in the development of urban areas based on public transport. Baghe Nazar, (18): 39-48.

Belzer, D. & Autler, G. (2002). Transit Oriented Development Moving from Rhetoric to Reality, A discussion paper prepared for the Brooking Institution Center on Urban and Metropolitan Policy and Great American Station Foundation, Washington, DC.

Calthrope, P. (1993). The Next American Metropolis (Ecology, Community and American Dream). Princeton, N.J.: Princeton Architectural Press.

Calvino, Italo (2002). Invisible Cities. Trans. Taraneh Yalda. Tehran: Publication of the Baghe Now.

CANPZD (City of Austin Neighborhood Planning and Zoning Department) (2006). Transit Oriented Development (TOD) Guidebook. Austin: Metropolitan Council.

Community Design + Architecture (2001). Model Transit-Oriented District Overlay Zoning Ordinance. Prepared for Valley Connections, Valley.

Daneshpoor, Syed A. H. & Charkhchian, M. (2007). Public spaces and factors affecting public life. Garden view, 4 (7): 95-106.

Dittmar, H. & Poticha, Sh. (2004). Defining Transit-Oriented Development: The New Regional Building Block, The New Transit Town; Best Practices in Transit-Oriented Development, Washington, Covelo & London: Island Press.

Fadayinejad, S. & Karampoor, K. (2009). The evolution of the fabric and its impact on the removal of memory from the old fabrics (Udlajan neighborhood of Tehran). Baghe Nazar, (6): 82-100.

Fokuhi, N. (2004). Urban Anthropology, (2nd ed.). Tehran. Ney publishing.

Garrick, N. & Hanley, J. G. (2010). How Shared Space Challenges Conventional Thinking about Transportation Design. Planetizen. https://www.planetizen.com/node/47317

Golkar, S. (2000). Urban Design Quality Production Components. Profile, (34): 74-83.

Greenberg, Ellen (2004). Regulations Shape Reality: Zoning for Transit-Oriented Development, The New Transit Town; Best Practices in Transit-Oriented Development, Washington, Covelo & London: Island Press.

Habibi, Syed M. (2004). We have clear imagery of the city. Computing, architecture, building Magazine, (3).

Habibi, Syed M. (2005). The city without memory, without identity. New cities publication. The new period 2, 3, 4.

Jung, Carl Gustav (2013). Man and His Symbols, (9th ed.), Trans. Soltanieh Mahmoud. Tehran: Jami Press.

Karimi, J. (1995). Personality psychology. Tehran: Virayesh publication.

Khanmohammadi, M. A. (2009). Upgrade the theoretical foundations of sustainable architecture from the Islamic perspective, Tehran: Iran University of Science and Technology.

Khavar, Kh. (2004) Cities and collective memory. Computing, architecture, building magazine, (3).

Koolhaas, Rem (2000). Generic City, translation of Maryam Amini. Name Farhang, 10(3): 65-81.

Lang. J. T. (1987). Creating Architectural Theory: The Role of the Behavioral Sciences in Environmental Design. New York: Van Nostrand Reinhold Compay.

Lynch, Kevin (1995). The Theory of Town. Trans. Seyyed Hossein Bahraini. Tehran: Tehran University.

Mirmoghtadayi, M. (2009). Measures of the possibility of the formation, registration and transfer of collective memories in Tehran Case Study. Journal of Fine Arts. (37): 5-16.

Rapaport, Amos (1999). Spatial Organization and the Built Environment, (in Companion Encyclopedia of Anthropology, ed. by Tim Ingold). London: Routledge, pp. 460-502.

Schultz, Norberg (2003). Architecture, Meaning and Location, Trans.Vida Norouz Borazjani. Tehran: Jane Jahan publishing.

Sultani, A. & Khodaparast, B. (2010). Evaluation of City Streets, According to Human-Oriented Approach: Case study Somayeh Street in Shiraz City. Armanshahr, Fall and Winter, (5).

Worster, Donald (2008). A Passion for Nature: The Life of John Muir. London: Oxford University Press.