An Analytical Approach to the Impact of Urban Physical Aspects on Culture and Behavior

*¹Farah Habib; *²Maryam Khastoo*

¹*Associate Professor, Tehran Science and Research Branch, Islamic Azad University, Tehran, Iran.*
²*Ph.D. Candidate, Tehran Science and Research Branch, Islamic Azad University, Tehran, Iran.*

ABSTRACT: Culture has always been regarded as the most important element of human communities; we can easily observe cultural changes. What causes these changes has been a matter of controversy. The issues such as people's increasingly getting detached from each other, psychopathy, behavioral abnormalities, traditions being increasingly faded away, malformation, extravagancy and value conversion into anti-values led the authors to conduct an investigation into the factors which cause such changes to happen. Moreover, the paper proposes strategies for improving the situation. First, the concept of culture and its elements are discussed. Then, the impact of urban physical aspects on the culture is dealt with. In developing a theoretical framework for the study, content analysis was performed. Qualitative and quantitative research methods were employed for small-scale (micro-level) and large-scale (macro-level) case studies, respectively. Finally, the results were discussed and a model was proposed for the impact of the urban physical aspects on culture and behavior.

Keywords: *Culture, Elements of culture, Urban physical aspects, Behavior.*

INTRODUCTION

Assessment of cultural impacts is seldom undertaken and often dismissed as purely anecdotal in comparison with the hard evidence offered by established economic and physical impact evaluations (Garcia, 2005). Culture as a dynamic concept has always been influenced by various factors, and its constituent elements such as language, worldview, religion, tradition, beliefs, values, norms, taboos, art, science and technology, history and heritage, narratives and myths, norms and rules, symbols, behavioral habits, and lifestyles, among others, are experiencing constant change due to many other factors. Throughout history, culture has helped form human habitats, and the culture of those communities has undergone many changes over time.

The term "culture" has its root in the classic, and perhaps pre-classic, language of Latin. It, in origin, means cultivation or nurture and was first used in about 1750 in the German language by some authors in its current sense (Ashouri, 2010). This term is one of the ancient words of the Persian language, which has been abundant not only in early prose of Dari (the Persian language spoken in Afghanistan) but also in the

manuscripts remnants of the Pahlavi language (Ashouri, 2010). The best-known and first thorough definition of culture was proposed by Edward Taylor, English anthropologist, in 1871:
"That complex whole which includes knowledge, belief, art, law, morals, custom, and any other capabilities and habits acquired by man as a member of society" (Sills, 1968, 527).

UNESCO[1] defines culture as "an element which encompasses all the reactions of an individual and his/her surrounding environment with the internal dimension of social groups, namely, a set of a given society's life styles and conditions which have been intertwined based on a common knowledge base and tradition as well as various forms of individual expression and realization" (Abolghasemi, 2006, 55).

In his definition of culture, Rapoport (1990) holds that culture can be considered by any individual as continuous choices which represent his/her ideal perfection in life and living environment (Naghizadeh, 2001).

The surrounding environment has always been exerting an influence on human behavior and culture in general. Environment and culture are so intertwined that it is hardly possible to separate them from each other. Their inseparability is not only due to the famous saying that environment affects

*Corresponding Author Email: *Khastou@qiau.ac.ir*

behavior but because behavior appears not to be comprehensible if segregated from its environmental context. Indeed, behavior should be defined in its environmental context (Altman, 1975). Consequently, culture can be comprehensively defined "a set of more or less solidarity or a mixture of attributed and acquired phenomena in behavioral and intellectual domains which have been conventional and acceptable in certain temporal and spatial cross-sections in a given society and are transferred from one generation to the next" (Fakouhi, 2012).

Culture is fluid in nature. Some cultures are regarded as an ancient tradition transferred from generation to generation unchanged. However, cultures need to constantly change if they are to remain meaningful (Habib, 2004). According to Sills (1968), primary factors affecting cultural changes are any change in an ecological region including both changes in the natural environment (e.g., the gradual drying of water) and artificial ones (e.g., migration from an ecological region), and connection with other communities, and any evolutional change within the society. As a unique trait of human beings, culture serves as a medium between humans and their environment to stabilize their survival and security. Therefore, culture remains adaptable. Ralph Piddington points out that "culture necessarily operates as an adaptable mechanism which allows the social and biological needs of human beings to be satisfied" (Ibid,551).

Any social and cultural system lives in a specific habitat which undoubtedly influences the cultural system. Some Eskimo cultures stand as a good instance of adaptation with environmental conditions (Ashouri, 2001). According to Hall (1966), the main threads of a given culture are always interwoven throughout the body of the respective society.

This is also supported by a few examples of different cultures quantitatively studied in terms of the impact of physical environment on their culture-building process (Rapoport, 1990). Some others are of the opinion that environment makes it possible to acquire and/or use some cultural features. However, this viewpoint does not determine major cultural changes. For example, Fuegian used to live deprived of clothing or housing in an intense cold and tough weather at the southern cape of South America (Ashouri, 2001).

The research hypotheses are as follows:
Urban physical aspects influence social behaviors;
Urban physical aspects influence culture over time.

MATERIALS AND METHODS

Understanding the Culture and the Urban Physical Aspects

Culture generally involves two groups of phenomena: behavioral or material and cognitive or immaterial. The cultural elements which are directly perceivable by one of our senses (meaning that they could be seen, heard, touched) are said to be material culture. Thus, every object is a special cultural phenomenon. Objects are the simplest forms of material culture which make it possible to get to more complicated forms. A telling example is behaviors in which the complicated gestural relationships bind with body conditions, objects, and social situations but are still a part of material culture. The behaviors of a rural woman baking bread, a salesperson in a big store, and a university professor giving a lecture in class are all parts of material culture. Art is one of the most outstanding forms of material culture, and a branch of anthropology is nowadays dedicated
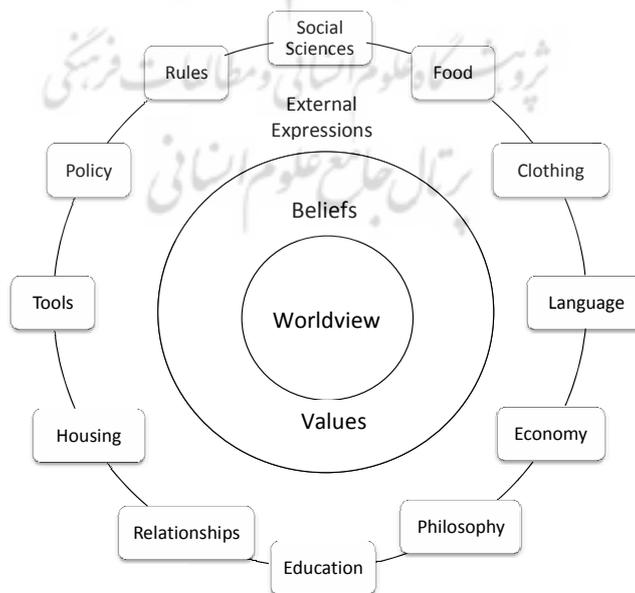

Fig. 1: The hierarchical classification of the elements of culture
(Source: Abolghasemi, 2006)

to it. Immaterial culture refers to the phenomena which could not be understood directly through the senses. An archaic poem, a rural song, a memory, a myth or a legend, political beliefs and ideas, thoughts, and spiritual beliefs are all forms of immaterial culture (Fakouhi, 2012). Any immaterial culture could only be perceived by us if it is (thoroughly or partially) converted(temporary or permanent)into material culture and could be understood in the form of a cultural relationship. For instance, a legend should be turned into a written story if it is to be understandable. Also, a belief such as respecting a senior citizen should be manifested in the form of standing up in front of him/her. Any immaterial phenomenon can take a material form in endless ways (Ibid).

Different classifications have been put forth for the constituent elements of culture. One of the most comprehensive of these classifications having a more generalized view of culture classifies its elements into three general layers. As can be seen in Fig.1, worldviews consider the beating heart of culture and are placed in the central layer. Values and beliefs are placed in the second layer which includes language, relationships, architecture and housing, tools, rules, food, clothing, and other material elements. Culture is both material and immaterial in this classification. As we move inward from the external layers to the internal ones, culture becomes more spiritual and cognitive; if we move in the opposite direction, culture becomes more material (Abolghasemi, 2006).

into four main sections, language, norms, beliefs, and values. They described the sections as follows:

Language: a set of signs and rules which are arranged in a meaningful way in order to form a complex communication system.

Norms: special social expectations, meaning the individual has to react in a specific way in a specified situation.

Beliefs: common thoughts and ideas which exist in a culture and form the basis of many norms and values.

Values: deeply related to beliefs and include abstract standards in a group or a society which describe ideal principles of the events which are desirable and morally acceptable (For instance, what is considered beautiful and what is considered ugly).

On the other hand, in this research, "urban physical aspects" is mainly urban spaces and built environments; referring to the part of the city form which is physical. In fact, the impact of the urban physical aspects on its nonphysical are studied.

The Impact of the Urban Physical Aspects on Human Beings

Instances

The previous research indicates that villagers who are in a limited space speak loudly to each other and when the distance between them increases, rather than getting closer to each other to speak, they raise their voice, but when it comes to urban societies people speak in a lower voice over short distances (Rouholamini, 2007).

Jacobs (2004) describes physical aspects destroying families as follows: driving in neighborhoods with no pedestrians and social environments has contributed to family problems, the main destructive elements of local communities are cars, not drugs or television etc. She also considers the useless urban zonings which are isolated in dead-end alleys and the shopping centers which are their only connection to locality, spending the dollars of their local costumers and are encouraging powers for the automobile culture.

In general, a city as a "container" can provide all sorts of conditions for different contained things. For example, Paris is a city in which outdoor areas are constructed attractively for people and has places allocated to walking, lying down etc. The sidewalks of Champ Elise create a fabulous feeling with their 100-feet gap between human beings and cars and the street. The other streets are so narrow that it is impossible for cars to get in, and this by itself creates variety and memorable moments. For the people walking in Tivoli Gardens of Copenhagen, in other sections of the pedestrian way systems of this city, listening to music, songs, laughter, screams, and lectures is a good experience which makes walking enjoyable and enchanting. The Del Campo Square in Sienna the principles have been met through the proper form. The whole square looks like a high plat form, a layer with suitable places for standing and sitting as devised in the layer around it. So there are choices for standing and sitting next to the bollards and street cafes and suitable areas for hesitation which protect people from behind and offer a breathtaking view of the area inside the square (Gehl, 1987). Therefore, there would be many other instances for the impact of urban physical aspects on human beings, two cases of which in Iran will be discussed in the following parts.

Approaches

Small Scale

Regarding the relationship between environment and behavior on small scale four theoretical sides should be noticed: free-will approach, possibilistic approach, probabilistic approach, and deterministic approach (Lang, 1987).

The free-will approach believes that the environment has no effect on human behavior. Given the fact that human behavior is seriously limited by factors such as some biological specifications, the free-will approach could not be defended.

The possibilistic approach considers the environment to be the provider of human behavior and a little more than that. This approach regards environment as a set of behavioral opportunities on the basis of which an action could be carried out or not. Analyzing human behavior reveals that humans do not have as much in their behavior as the possibilistics think. Each individual has a set of motivations and qualifications within himself/herself at least a part of which was determined by the geographical, social, and cultural environments.

According to determinism, when people behave freely, they are really influenced by genetics and environment. Environment determinism, which is a branch of the Evolution theory, considers the environment as the main determinant of human behavior. In this theory, the environment is considered to be geographical environment or the Earth. The deterministic approach considers the relationship between the environment and behavior to be causal. The structural determinism means that any change in designing the environment results in changes in social behaviors.

The issue of the probabilistic goes like this: considering person A in the conditions a, b, and c who is placed in environment E and possesses qualities d, c, and f and with the motivation to carry out M, there exists the probability that person A behaves B.

It is worth noting that "the probabilistic approach has the most practicality in the recent research" (Lang, 1987, 116). In this research, the probabilistic approach is used for macro level case study.

Large Scale

In his study into the effect of cold and hot weather on the function of the human heart, Ibn-Khaldun (cited by Fakouhi, 2003) held that in cold places humans are stronger and that the people of hot countries are cowardly as elderly people and the people of cold countries are energetic as young people.

Montesquieu takes into account numerous issues of different climates and considers the element of climate an influential physical factor in the formation of those societies alongside nonphysical factors such as beliefs, costumes, and traditions. Montesquieu believed that the importance of climate factor gradually subsides as societies grow. He was one of the pioneers who proposed the concept of natural determinism (Fakouhi, 2003). A connection is also observed between Montesquieu andIbn-Khaldun; the latter classifies different societies in

his book "Prolegomena" in accordance with the living style, and livelihood and tries to use a sort of climate sociology in order to prove the effect of climate on the formation of human societies and human behavior. "Happiness" and "stupidity" of black people is due to the effects of heat and the humid climate of their environment and the "foresight" and "shyness" of the Western people reveals the effect of their cold climate and their mountainous environment (Ibid).

Broadly, the three main approaches in relation to the effect of the natural environment on human beingare environmental determinism, probabilistic approach, and cultural ecology (Anderson & Taylor, 2008; Lenvinson & Ember, 1996).

Environmental determinism, which has existed since the beginning of time, is a principle which states that the activities of humans are directly related to the environment. For instance, Hippocrates relates the specifications of people in specific places to the special environmental features of that place such as humidity, altitude, and topography. While, Aristotle believes that the climatic zones such as cold, hot, and temperate climates determine the people's life style (Johnson et al., 2001).

The predictable reaction to environmental determinism was to deny that environment playsa significant role in determining sociocultural differences. Since denying any role to environment flew in face of some obvious realities, environment was given a minor role of limiting the range of possible sociocultural forms, hence the term "possibilism."Possibilism is associated with anthropology's rejection of any sort of non-cultural determinism (racial, economic). This rejection began in around 1900; associated with anthropology staking out its own academic turf (distinguishing itself from biology, economics, psychology).The essence of the possibilistic view is that the environment may limit sociocultural variation, but it does not directly cause it. That is, environmental factors may explain why some cultural features do not occur in a particular setting
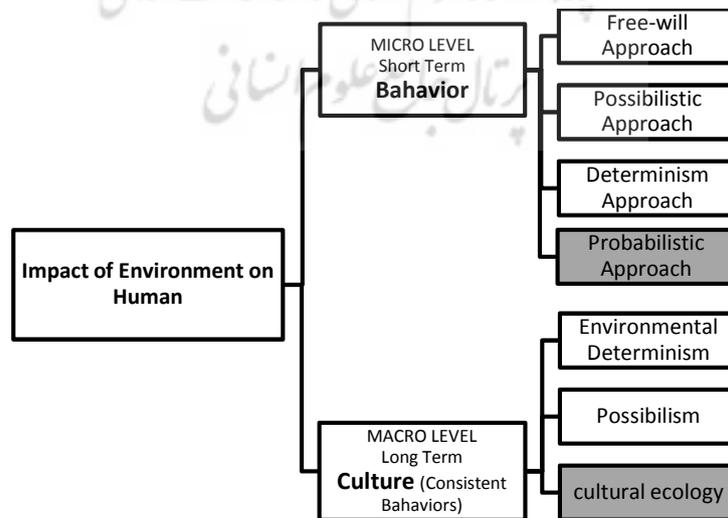

Fig. 2: The impact of environment on human beings in two dimensions

(e.g., absence of agriculture in the Arctic), but it cannot explain why they occur (presence of agriculture in other areas). As with environmental determinism, possibilism took various forms: some possibilists fiercely rejected any significant role for environmental factors in explaining sociocultural diversity beyond obvious things like absence of pineapple plantations in Greenland, while more moderate ones looked at subtle ways in which environment can limit the spread of cultural traits. An alternative to both environmental determinism and possibilism is the position that cultures interact with their environmental settings through a process of adaptation. This view was first articulated in detail by Julian Steward, who offered what he called "cultural ecology" as an alternative to the "fruitless assumption that culture comes from culture." Steward proposed that cultural change is driven by techno-economic factors. Cultures do tend to perpetuate themselves, but over the millennia cultures in different environments have changed tremendously, and these changes are basically traceable to new adaptations required by changing technology and productive arrangements (Lenvinson & Ember, 1996). Fig.2 gives the impact of environment on humans in two dimensions.

RESULTS AND DISSCUSION

Khayyam Street of Qazvin (Micro Level)

Khayyam Street of Qazvin is one of the most crowded and commercial streets of this city. Two sections of the street were studied which are different in terms of width and the height of facades. The northern part of the street (Fig. 3 and 4) is double-carriage and wider with less enclosure and the southern part (Fig. 5 and 6) is one-way, less wide, and more enclosed. Doing field research and asking people brought us to the result that although these two sections of the street are the same with the exception of size, the enclosure and other physical conditions affect people's behavior. For instance, it was observed that people move faster in the northern section of the street which is less enclosed and sit on the benches less often. However, in the southern section the pace of moving is lower, and people sit more often. In addition, people feel more comfortable in the southern section of the street and pay more attention to the cleanliness of the street floor. It seems that there is more "sense of place" in the southern part. The other results are summarized in Table 1.

Fig. 3: Northern part of Khayyam street

Fig. 4: Northern part of Khayyam street

Fig. 5: Southern part of Khayyam street

Fig. 6: Southern part of Khayyam street

Table 1: The results of behavioral analysis in Khayyam Street of Qazvin
(based on observations and questionnaires)

Northern part of Khayyam Street	Southern part of Khayyam Street
Two traffic lines	One traffic line
Less enclosed	More enclosed
The width of the sidewalk is half the width of the road.	The width of the sidewalk and the road are approximately the same.
One Huckster all over the street	More than 10 Hucksters over the street
No Bicycles	Many Bicycle riders
Less clean floors (Fig. 4)	More clean floors (Fig. 6)
Faster pedestrians	Pedestrians spend more time here
No sitting on benches	some sited person on benches
Passing the street only in the designated pedestrian lines	Passing the street everywhere
Less convenient	More convenient
Less sense of place	More sense of place

Janbazan and Dastgheyb Neighborhood (Macro Level)

Janbazan neighborhood and Dastgheyb neighborhood are located in city of Qazvin relatively close to each other and are similar regarding economic and demographic features but are absolutely different from physical aspects. Janbazan has a hierarchical designed structure (Fig. 7), and most houses are available through dead-end alleys while Dastgheyb does not possess hierarchal-convenient system and the houses are located in long alleys of a grid structure (Fig. 8).

The research was carried out taking into account the children's playing type and their playgrounds. 110 questionnaires were gathered from 12- to 17-year-olds (young adults). Half of the participants were residents of Janbazan neighborhood and the other half were the residents of Dastgheyb.

Doing the field research and the questionnaires indicated that the system of the streets affected children's playing. For instance, as can be seen in Table 2, the number of hours children playedon the street was more in Janbazan neighborhood than in Dastgheyb neighborhood. The reasons mentioned by the children included lack of safety and insufficient street width etc. The number of hours children spend on the street was significantly less. The children were more familiar with team plays in Janbazan neighborhood and in Dastgheyb neighborhood most kids were busy playing computer games at home. The children living in those two neighborhoods are almost the same in terms of socio-economic level. The only changed variant was the neighborhood physical structure.

Fig. 7: Janbazan Neighborhood
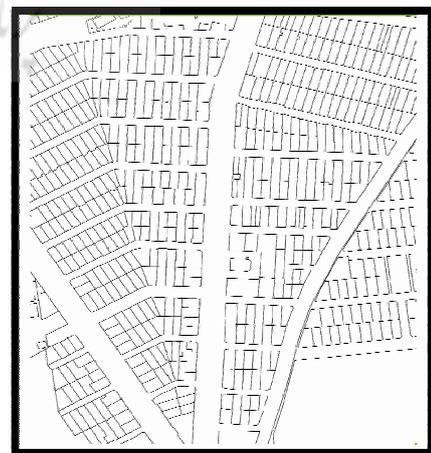
Fig. 8: Dastgheib Neighborhood

Table 2: The results of questionnaires about kids playing in two neighborhoods

Janbazan neighborhood With Network Hierarchy Most of the houses in the blind alleys (Hierarchical Network)	Dastgheib neighborhood WithoutNetwork Hierarchy Most of the houses in long open alleys (Grid Network)
Average of hours playing in the alley: 63.6% less than 7 hours a week 9% 7 to 10 hours a week 10.9% more than 10 hours a week 12.7% No answer	Average of hours playing in the alley: 27.2% less than 7 hours a week 20% 7 to 10 hours a week 47.3% more than 10 hours a week 5.4% No answer
Total: 55 person	Total: 55 person
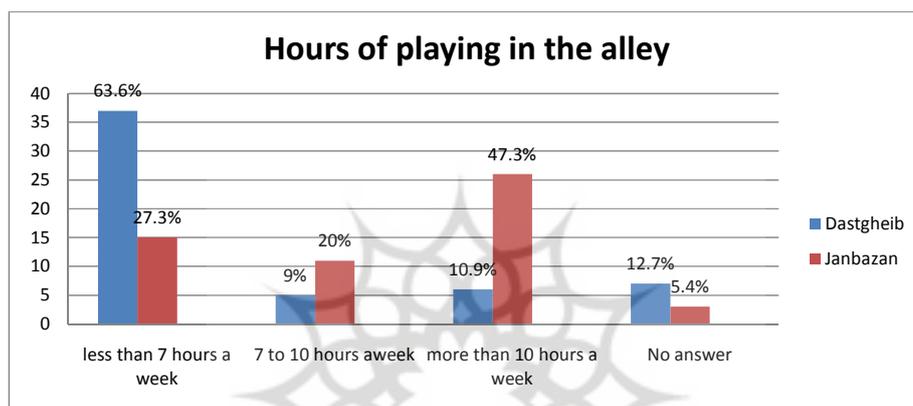
Fig. 9: The hours of playing in the ally for two neighborhoods
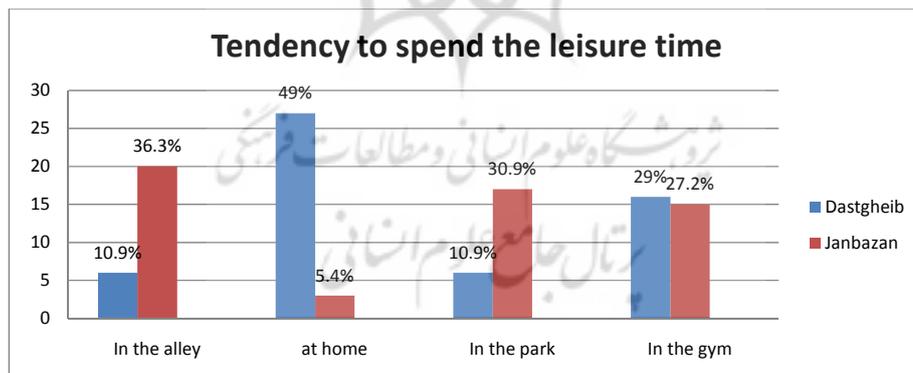
Fig. 10: Place of tendency to spend the leisure time

As it shown in Fig. 10, the children in Janbazan neighborhood have more tendencies to spend their time outside home the tendency for spending time in the gym is almost the same for both neighborhoods.

CONCLUSION

The first case study supported the first hypothesis of the research, meaning that some social behaviors change when affected by urban physical aspects such as the relationship between enclosure and the speed of movement or many other behaviors mentioned in previous parts. The second case study supported the second hypothesis. In other words, the physical aspects of the neighborhood affect the culture in the long run, for instance children's playing. As a result, a model is proposed for the effect of the urban physical aspects on culture which is shown in Fig. 11. Therefore it should be possible to consider the
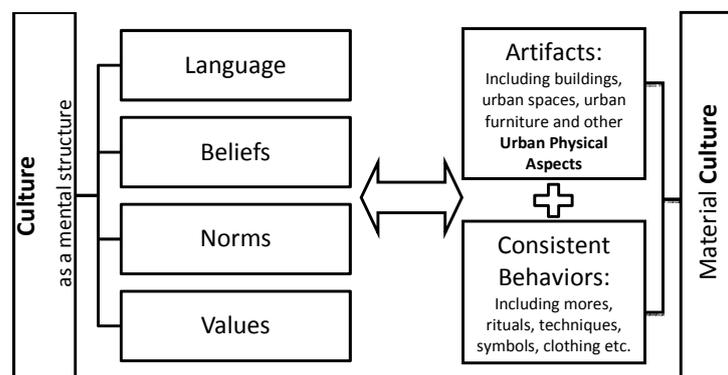
Fig. 11: The analytical Model for the Impact of Urban physical Aspects on Culture and Behavior

impact of urban physical aspects on the culture in two levels: in macro level, physical aspects probably affect the behaviors and these changes lead to consistent behaviors and constant choices for people's lifestyle that eventually forms the culture.

As is shown in Fig. 11, as a human mental structure consists of four main elements named language, beliefs, norms and values that can be considered as the immaterial culture; then these elements are embodied in two parts consisting of consistent behaviors and artifacts including urban physical aspects that can be regarded as the material culture and relationship between these parts are always mutual and interaction between material and immaterial culture will be continued over time.

AKNOWLEDGMENT

ENDNOTES

1. United Nations Educational Scientific and Cultural Organization

REFERENCES

Abolghasemi, M. (2006). *Cognition of the culture*. Tehran: ArshPazhouh.

Anderson, M. L., & Taylor, H. F. (2008). *Sociology: understanding diverse society*. USA: Thomson Wadsworth.

Altman, I. (1975). *The environment and social behavior*. Monterey, Calif.: Brooks/Cole Pub. Co.

Ashouri, D. (2001). *Definitions and meaning of culture (4th ed.)*. Tehran: Agah.

Fakouhi, N. (2003). *The History of Thoughts and Theories of Anthropology*. Tehran: Nei.

Fakouhi, N. (2012). *The fundamentals of Anthropology*. Tehran: Nei.

Garcia, B. (2005). Deconstructing the City of Culture: The Long-term Cultural Legacies of Glasgow 1990. *Urban Studies Journal*. May 2005 vol. 42 no. 5-6, 841-868, doi: 10.1080/00420980500107532.

Gehl, J. (1987). *Life between Buildings*. Van Nostrand Reinhold press.

Habib, F. (2004). City and the Culture. *Housing and Revolution Journal*. No. 105.

Hall, E. (1966). *The Hidden Dimension*. Garden City, N.Y., Doubleday Publication.

Jacobs, J. (2004). *Dark Age Ahead*. U.S.A.: Random House Publication.

Johnson R. J., Gregory, D., Pratt, G., & Watts, M. (2001). *The Dictionary of Human Geography*. (4th Ed). Blackwell Publishers Ltd.

Lang, J. (1987). Creating Architectural Theory: *The Role of the Behavioral Sciences in Environmental Design*. Van Nostrand Reinhold Publisher.

Lenvinson, D. & Ember, M. (1996). *Encyclopedia of cultural Anthropology*. Canada: Fitzhenry & White Side Ltd. Vol. 1.

Naghizadeh, M. (2001). Culture: living and Sublimity context for Society. *Research for Persian language and literature Journal*. No. 4.

Rapoport, A. (1990). *Meaning of Built Environment, a Nonverbal Communication Approach*. University of Arizona Press.

Rouholamini, M. (2007). *Culture, an Anthropological Approach (4th Ed.)*. Tehran: Ettelaat Publication.

Sills, D., L. (1968). *International Encyclopedia of social Science*. The Macmillan Company.