

Investigating the Factors Influencing the Enhancement of Social Environment Affordances

H. Ameri Siahooyi^{1*}, F. Ahmadi Sarkhoni²

1. Associate Professor, Payam-e-Noor University of shahre-rey

2. Payam-e-Noor University of Bandar Abbas

Abstract

According to Gibson, the affordances of everything, material or nonmaterial, constitute part of its assets making it usable to a certain creature or a member of creatures' species. The affordances of an artificial environment (social environment herein) restrict or increase the behavioral choices according to the environment's structure. In other words, every environment can play a considerable role in the enhancement and improvement and/or reduction of behavior. The present study seeks to find the factors influencing the increase in the affordance of an environment. The study has been conducted based on a descriptive-analytical method. The investigation of the first-hand resources, library documents and observations account for a notable quotient of the study goals' advancement. In the end, the results show that the creation of factors like the supply of physical needs, attachment to a place, memorability, sociability of the spaces, legibility in the attachments to a place and contribution to the growth of the social environment affordances is influential.

Keywords: environment's nature, environment affordance, social environment, affordance enhancement

* e-mail: babak.dariush@gmail.com

Introduction:

The effect of environment on the behavior is one of the three essential questions related to human-environment. In this regard, the opinions of the researchers and experts are laid on the foundation that the contextual environment, disregarding being good or bad, accepts the occurrence of behaviors. Moreover, the evidence, as well as the mores, shows that human behavior differs in an environment from the other. Rappaport (1990) believes that the individuals' situation and essential rankings like gender, social situation, activity performance locality and other issues of the like, as well, influence human behavior. Disregarding a certain environment, one can dare to say that the social environments are the perpetual and continuous component of the designing of every environment.

The human beings' sociability and the need for the social environment, face-to-face contact, social interaction and generally the need for establishing communication are well clear to everyone.

The important discussion in this study is the way the environment affordances influence human beings. Thus, the present study seeks to recognize the parameters influencing the enhancement of the affordances of a social environment. Therefore, after a review of the study background on the environment and its nature and the important stances in the human-environment interrelationships, the ideas and notions of the thinkers about the quality of these effects will be investigated.

Study Background:

Every study has a background the reference to which provides the researcher with the previously explored aspects and dimensions for the performing of new research. Based thereon, the reference to the forerunners' performance is a lamp illuminating the path for future clearer and more successful studies.

Daneshgar and Islampour (2012) believe that the environment affordance is a frequently applied concept with a vast domain that has been popularized by the behavioral sciences' research in the area of architecture and manmade environment. The present study's

authors have made efforts to offer a framework for perceiving the affordances of a given environment and its constituent indicators according to the theory of environment affordance and fundamental human behavior processes.

Khalilnejad (2015) tries investigating the essential concepts of the human-environment interrelationships thereby to bridge the human beings' needs to their peripheral environment. He thinks of environment perception and subsequently environment recognition as two important factors in the determination of human behavior.

Moradi (2015) realizes the human perception of the environment as the factor creating behaviors therein. He believes that conscious comprehension comes about when human beings diagnose the factor giving rise to a behavior in a certain environment. Resultantly, environmental designing should be in such a way that conscious performance is eased.

Study Question:

How do social and physical factors influence the environment affordance?

Study Method:

The present study has been conducted based on an analytical-descriptive method. Amongst the most important references of the current research paper, substantiation on the written researches and texts, in the first place, and reference to the first-hand and library resources, in the second place, can be pointed out.

Theoretical Foundations:

1. Environment:

The term environment has been so frequently used that it is difficult to recognize its meaning. Geographers define the environment as the land and climate; psychologists realize environment as the people and their personalities; sociologists know social organizations and processes as the environment and, finally, architects specify buildings and the open spaces and landscapes as the environment. Each of these classifications is related to the intentions expected from the environment (Porteous, 1977). Some of the analyses have made a distinction between physical,

social, psychological and behavioral environments in such a way that:

- 1) The physical or contextual environment includes terrestrial and geographical spaces
- 2) The social environment includes the institutions comprised of individuals and groups
- 3) The psychological environment includes the people’s mental images
- 4) The behavioral environment includes the set of factors to which an individual reacts.

The main point in these classifications and similar groupings is the distinction between the real, actual and objective world in the periphery of the human beings and the phenomenological world that influence the people’s psychological reactions and behavioral patterns in either conscious or unconscious manner (Lang, 1987, p.87).

Kurt Koffka (1935), as well, distinguishes the geographical environment and behavioral environment with the former being defined as the objective environment and the realities in the periphery of the human beings and the latter being specified as the cognitive image of the objective environment shaping the essence of the behaviors. Other researchers

have also had their own opinions about the environment: for example, Kork divides the environment into phenomenal and personal. Douglas Porteous, C. (1977) who has been impressed by Kork, as well, adds conceptual environment to the phenomenal and personal environments. “The peripheral spaces are termed environment”; this is the most original and most primitive definition offered for the environment (Jafarikhani and Goodarzi, 2012).

The goal in such categorizations is the recognition of the framework of the factors influencing human life. All of these classifications have recognized the existence of a potential environment for behavior and an effective environment that is focused and used by an individual (Gibson, 1996).

1.1. Artificial Environment:

As for the relationship between environment and behavior, there are four theoretical stances recognizable: free-will approach, possibilistic approach, probabilistic approach and deterministic approach (Porteous, 1977).

Free will approach	environment has no effect on the human behavior
Possibilistic approach	environment is the supplier of the human beings’ needs and a little more than that.
Deterministic approach	environment is the supplier of the human beings’ original behavior.
Probabilistic approach	the human beings’ behaviors are similar to one another under identical conditions.

Diagram (1): the four hypothetical stances regarding the environment and behavior (authors, 2019)

According to the diagram (1), the fourth stance, i.e. the probabilistic approach, is largely matched with the scientists’ recent observations and studies. It is assumed here that two human beings exhibit similar behaviors under the same conditions with identical properties. Therefore, accepting it based on the

definitions that the constructed environment is part of the terrestrial or geographical and cultural environments and indeed the human beings’ living space and/or that the constructed environment is a collection of adaptations acquired by the human beings in the geographical and cultural environments, it can

be imagined that the environmental organization influences the people’s mutual relations with the geographical environment. Therefore, every change in the constructed environment makes the change in the world’s affordances more likely. The affordances of the constructed environment support some of the behaviors and restrict some others (Lang, 1987).

1.2. Environment Affordances (Competencies): The term “affordance” means “competency” and it has been posited by a psychologist called James J.

Gibson. The competencies of everything, material and nonmaterial, are part of its possessions making it usable for a certain creature or a member of a given species of creatures. Every constructed environment is qualified for a set of affordances fitting human activities. The notable point in this discussion is that the affordances of a physical environment, good or bad, are offered directly or indirectly by that environment with its specific characteristics.

Environment affordances	
Direct	Indirect
Supplying of the activities by the environment	It includes things like symbolic meanings that depend on the patterns’ association with a source.

Diagram (2): environment affordance (authors, 2019)

The affordances of the constructed environment limit or expand the selection of behavior depending on the way the environment has been configured. For instance, Koffka (1935) believed that objects have

demanding and inviting qualities (Lang, 1987). Edward Hall, as well, believes that the environment’s physical properties make it welcome the occurrence of certain behaviors.

Theorist	Theory
Gibson (1997)	Every constructed environment is a collection of affordances for human activities.
Hall (1997)	The environment’s physical properties make it prone to the occurrence of certain behaviors.
Levin	The value of an object is given thereto by the people’s values and needs.
Koffka (1935)	Objects have demanding and/or inviting qualities.
Lang (2014)	The affordances of the constructed environment support some behaviors and restrict some others.
Rappaport (1977)	An environment has an effect a lot larger than a material context on human beings.

Diagram 3: theories related to the constructed environment and human behavior (authors, 2019)

1.3. Social Environments:

In terms of providing the possibility of social interaction, the environments are categorized into two sets: the places that have been constructed by considering the people’s interaction and the places wherein the social interaction is the product of other functional

intentions (Lang, 1987).

Architectural designers and urban planners correspondingly place cities in the first and second sets (Lang, 1987).

In general, the social or interactional environments can be investigated in two general scales of the build-

ing and the city. In apartments, the administrative institutions, recreational complexes, waiting spaces, corridors, and large halls can be accepted as places accommodating a large number of individuals. In cities, as well, the public spaces can attract the people to themselves if they are amusing for the people and in case there are places in them offering foodstuff as well as if they supply them with the required safety. The people exhibit certain social behaviors according to the biological properties, culture, gender, age, and nationality in each of the aforesaid two scales. Disregarding the aforementioned indicators, the issue taken into account in the designing and existence of such places is making efforts for creating grounds of social communication, human interaction, face-to-face contact, familiarization and other goals of the like. Accepting the aforementioned discussion, the social environment should have the capability of being adjusted to parameters contributing to the satisfaction of the human needs. Here, the indicators influencing the environment affordance are discussable within two sets of primary and secondary factors.

2. Factors Influencing Environment Affordance:

2.1. Primary Factors:

2.1.1. Supply of the Physical Needs:

The preliminary classifications of the constructed environment show a range of its affordances. In the simplest form, the environment's hard surfaces supply the human beings' movement and displacement. Some of the surfaces are more slippery than the others are and cause slipping. Cases of such a kind are amongst the essential affordances of the environment. Furthermore, surfaces' configuration can meet the need for playing instruments and toys, work tools and machinery (Lang, 1987).

2.1.2. Attachment to a Place:

Attachment to a place or spatial attachment is a multidimensional, complex and interdisciplinary concept amalgamating various aspects of the people's bond to a place. This concept has drawn the attention of many researchers in various fields of studies including environmental psychology, sociology, human

geography, architecture and so forth (Pesaran et al., 1994, p.2). Attachment to a place has been defined as the positive affectionate relationship between the individuals living in an environment. "This relationship causes a feeling of comfort and security" hence the places that lead to the emergence of strong emotional memories would be effective in creating a sort of attraction. Therefore, the attachment to a place spontaneously causes the creation of interaction and presence in the social groups.

2.1.3. Memorability:

Environments occasionally enliven memories and/or essentially bind the human beings to their memories. The closeness of the workplace's designing type with human beings' throughputs causes their closeness to the workspace hence the feeling of memorability and memory processing in them. "Sense of place not only causes coordination and proper function of the architectural setting and human beings but it is also a factor for creating security, pleasure and affective perceptions in the individuals and contributes to the individuals' acquiring of certain identities and feeling of belonging to the place. In today's interpretations, sense of place is the thing created by individuals during a certain period and describing the environment's state and mood" (Falahat, 2006).

2.1.4. Space's Sociability:

The use of such words as "sociopetal" and "sociofugal" describes the spaces making the people gather around or be separated, respectively. These words have been defined by Humphrey Osmand (1957). Public spaces of a place cause an improvement in the proper behavioral patterns. In fact, sociopetality of the public spaces is based on the people's need for sense of social belonging and interaction with one another and this can be facilitated in a supportive social space alongside such cases as the safeguarding of the physiological comfort, sense of possession and perception of justice in the space (Shoja'ei and Partovi, 2015). Social interaction and establishment of communication can be a physical subject, glancing, conversation and communication between the individuals and, of course, it entails the definition of

the proportionate events and activities (Daneshpour and Charkhchian, 2007). The socialization process can be attained via establishing social interaction and communication between the users of every public and common architectural space and the ability of effective participation in the interactions with the others, whether in private, public, or even occupational lives of the human beings, is of a great importance (Forgas and Jones, 1985).

2.1.5. Legibility:

According to Lynch (1977), the ability to be recognized or legibility is one of the most important features of a city. Legibility refers to the easy identification of the city's aspects, their organization in the form of a single project and easy remembering. Human beings usually prefer environments that are easily read and readily perceived. The reason for this pertains to the high vital value of such environments in the history of their evolution (Francis, 1993). In daily life, the buildings' legibility, i.e. simplicity of finding a way into them is also important. The issue is twice as much significance in the large buildings. Generally, the existence of legibility in the artificial space, whether in micro- or macro-level, causes acceleration in the recognition of the environment (Ibid, p.59).

2.2. Secondary Factors:

2.2.1. Furniture:

Spaces should induce the feeling that they are appropriate for the activities taking place in them. Their arrangements also influence the behavior and the emotions of the individuals. The furniture is one of the main facilitators of conversation and specifying the borders of communication and the suitable interactional distances. Essentially, the three major qualities of great importance in determining the interaction styles in a room are furniture, their spacing and the decorative nature of the applied symbols (Francis, 1993).

2.2.2. Light:

In the entire course of history, the people believed that sunlight could contribute to the reduction of fatigue and depression (Francis, 1993). In fact, the

amount of light and illumination is both practically and symbolically important. A combination of natural and artificial light is suggested for a place of interaction. The controllability of the artificial light and, of course, dynamicity of the natural light both causes the use of them in a place (Lang, 1987).

2.2.3. Color:

The luminosity of painting points to the quality of dye emitting from the color stimulus. Generally, there is a positive relationship between luminosity and pleasantness. The people usually pay more attention to bright, saturated and cold colors. The dispositional moods can even change in response to various colors (Francis, 1993). Colors contribute to the creation of a sense of satisfaction. This comes about through the color totality between the various places. The combination of various colors, conflicts and congruence considerably contribute to the increase in the quality of such an effect.

2.2.4. Sound:

While sounds have a physical nature, noises are psychological concepts defined as unfavorable (Francis, 1993). In the social spaces, the nature of the sound or noise is not taken into consideration; instead, the noise is envisioned as abnormal when rendering the performance of activity difficult. Human beings, as well, have different sensitivities in reacting to the noises. In general, people like to hear sounds in a public space and even have a good feeling upon hearing them unless the sound exceeds the hearing threshold of the human beings.

2.2.5. Green Space:

The qualities related to the existence of green space, green texture and, in general, greenery, are known to the public. Meanwhile contributing to ventilation, the greenery acts as a filter against the air impurities and influences the improvement of a climate's situation. Herein, besides greenery's betterment of the environment, the effect of its presence on the human psyche also matters. The diversity of the various species, deciduousness and perennial nature of the plant varieties that bring about visual dynamicity and motility during the various seasons of the year, adjust

the sun's irradiation, contribute to the moderation of the temperature conditions, and eventually result in physical comfort are amongst the advantages of the nature's presence in the interactional spaces.

3. Conclusion:

People usually act based on the readings of the environmental signs. If they can receive the codes determined for an environment, it can be hoped that the people would act based on the environment's wants. The point worthy of discussion here is that it is only in case of having the environment's codes and affordances revealed to the people that they can be expected to get enhanced in their activities. It is

conjectured that the environment affordances are of greater importance about the social environments as compared to the others because social environments are enumerated amongst the inseparable parts of the other environments, as well.

Following explication of the environment and its effect on the human beings and considering the environment's affordance, efforts were made in the present study to come up with the expression of such descriptions in the social environments. Resultantly, two primary and secondary sets of the environmentally effective parameters were evaluated. These parameters can be seen in the table below.

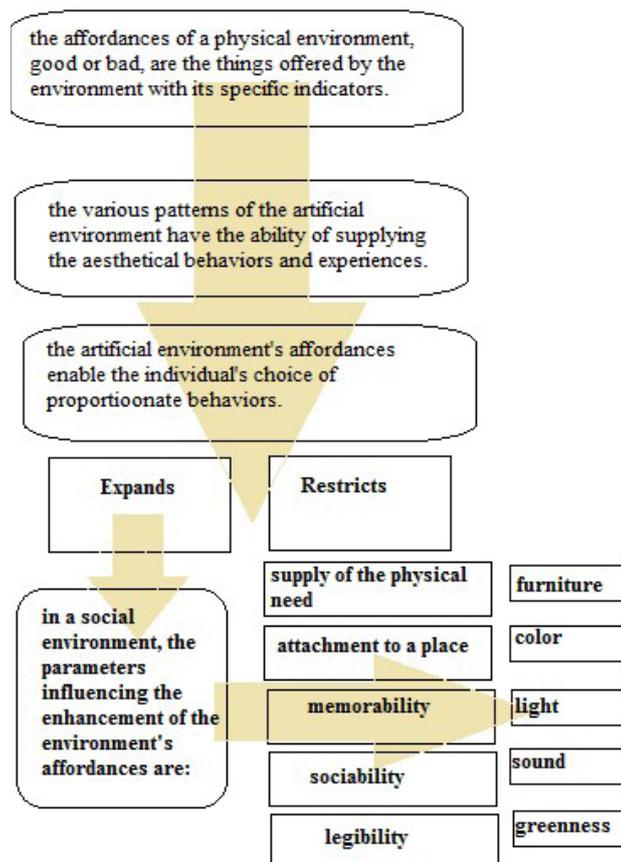


Diagram (4): primary and secondary factors influencing the enhancement of the environment affordances (authors, 2019)

Sources

- Daneshgar, G; Islampour M. (2012), Analysis of Environmental Capability Theory from Gibson's Viewpoint and Its Feedback on Human and Environmental Studies in Construction, *Armanshahr*, 5(9).
- Daneshpour, S; Charkhchian, M (2007). Public Spaces and Factors Affecting Public Life, *Bagh-e-Nazar Journal*, No. 7, pp. 22.
- Falahat, M. (2006), Concept of sense of place and its constituents, *Honarhaye-ziba*, No. 26.
- Forgas, J. P., & Jones, R. (1985). *Interpersonal behavior: The psychology of social interaction*. Elmsford, NY, US: Pergamon Press.
- Francis T. M.(1993), *environmental psychology*, Brooks-Cole Publishing Company.
- Gibson J.J. (1977). *The Theory of Affordance*. (R. Shawand, J. Bransford. eds.). *Perceiving, Acting and Knowing*. New York: Halsted.
- Jafarikhah, S; Goodarzi, M. (2012), A Framework for Knowledge of Environmental Capability and its Components, First National Conference on Environmental Protection and Planning, Hamadan, Islamic Azad University of Hamadan, Tomorrow Environmental Co-thinkers.
- Khalilnejad, T. (2015), Discovering the Principles of Environmental Design by Investigating Environmental Theory, International Conference on Architecture, Urban Development and Environment, Tehran.
- Lang, J. T. (1987). *Creating architectural theory: The role of the behavioral sciences in environmental design*. New York: Van Nostrand Reinhold Co.
- Moradi, S. (2015), Environmental Perception Process Based on Environmental Capability Theory, International Conference on New Achievements in Civil Engineering, Architecture, Environment and Urban Management, Tehran.
- Rapoport, A. (1990). *The meaning of the built environment: A nonverbal communication approach*. Tucson: University of Arizona Press.
- Shojaee, D; Partovi,P (2015). Factors Influencing the Creation and Promotion of Socialization in Public Spaces of Different Scales in Tehran (Case Study: Public Spaces of Two Neighborhoods and One District in Tehran Area 7), *Bagh-e- Nazar*, 34.
- Pesaran, A; Pourbei, M; Fereydooni, S (2014), Investigating attachment to place in office environments with social sustainability approach, National Conference on Urban Development, Urban Management and Sustainable Development, Tehran.
- Porteous, J. (1977), *Environmental aesthetics: Ideas, politics and planning*, Routledge

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