

## Place Attachment in Socially Sustainable Neighborhoods

(Case Study: Jolfa, Esfahan)

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### Abstract

Place attachment and place dependence are two aspects of people's bonding to place that are considered complimentary components. Place attachment is a measure of the emotional bonding that people have to their neighborhood or other places. When place attachment is applied to the neighborhood it can be expressed as a strong feeling of being at home or the unwillingness to leave the place. The associations between physical place and social networks to place attachment have not been at the forefront of sustainable community planning. The predominant approach has avoided the question of how to guide people towards becoming a key factor of their communities. Even though the concept has originally been developed for American and European neighborhood planning, it could also be adapted to other neighborhoods. This paper will examine the predictors of place attachment in the neighborhood of Jolfa in search of their relationship with sustainability. Surveys and face-to-face interviews were conducted to investigate place attachment and the relationship between attachment and the physical and social predictors of the social sustainable neighborhood. The findings indicate a significant attachment to the neighborhood, which contributes to the persons' tendency to remain in the community. Also, physical dimensions of attachment are regarded as essential in developing place dependence resulting in attachment.

### Keywords

Place Attachment, Community Attachment, Place Dependence, Sustainable Neighborhood

## **Introduction**

It has been nearly twenty years since the first research into place attachment by Altman and Low was published in their famous book entitled “Place Attachment (Human Behavior and Environment)”. At that time the discussion of place attachment was still in its formative stages. The aforesaid book introduced the application of place attachment as a bond between man and his environment (Altman & Low, 1992a; Devine-Wright, 2011). However, the discussion was so new that controversy arose over its definition and how it relates to constructs, like local identity, sense of place and place attachment. Since then, the significance of place attachment has been well established.

Discussion of place attachment has come a long way from twenty years ago. Just as Scannell and Gifford noted in 2010, Altman and Low had well predicted that the theory of place attachment would quickly transition from the conceptual stage and enter the practical stage and it appears this has indeed been achieved. (Scannell & Gifford, 2010)

While current developments in the theory and methods of place attachment are evolving and expanding, the use of its applications have been seen to continue from the fields of social science and design principles to environmental issues, like participation, social housing and community design. (Manzo & Devin-Wright, 2013) It is for this reason that research into this theory, methods and practice will be undertaken.

## **Interaction between human and the environment**

As it has been shown, any structure without human presence is only a geographic location and only with the addition of humans does a place gain meaning. Place formation is the result of a societal process consisting of social interactions and the activities within it and just as Altman and Low believed, place is a container formed by cultural, social and individual interactions. The first reference to the effective bond between people and place was produced by Marc Fried with his famed study on the psychological effects of migration from the suburbs of Boston, published in the book *Urban Renewal: The Record And The Controversy* under the section *Grieving For A Lost Home: Psychological Costs Of Relocation*. (Fried, 1966)

Studies completed in this area can be divided into two aspects, human centered and community centered. (Manzo & Perkins, 2006) In general the interaction between man and space is established in three dimensions: cognitive, behavioral and emotional. Cognitive engagement leads to spatial perception and understanding of environmental elements which are used for wayfinding. Behavioral interaction is related to activity and the functional relationship between humans and the environment and emotional interaction refers to the satisfaction in the emotional bond to place. Place attachment develops as the result of the three above dimensions.

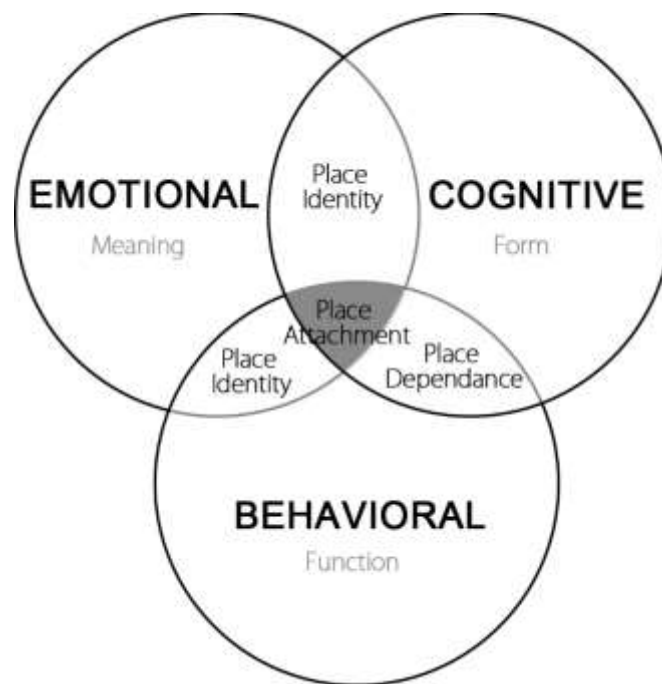


Figure 1-Variou aspects of human interaction with the environment and its relationship to sense of place dimensions

Moos<sup>1</sup> reasoned that not only do humans experience a space with their own individual interpretation but also through the physical conditions of the space that speak to him. (Moos, 2009) However, the individual human experience of space is considered the main tenet of his semantic understanding of the environment. Rachel and Stephen Kaplan in their book “The Experience of Nature: A Psychological Perspective”, take the perspective of psychology which indicates that not only do the physical characteristics of an environment have an effect on its meaning but so does its interpretation by the individual which is seen as the formation of a sense of place. According to Bruce Walsh in his book “Theories of Person-Environment Interaction”, a physical location can only be understood and experienced through his personal influence on the environment and it is the psychological environment and not the physical that determines how a person will react. (Walsh, 1988)

Several social science concepts have attempted to explain different aspects of the interaction between man and his environment. An overview by Altman and Low (1992) named a whole range of concepts with different combinations of cognitive, behavioral and emotional facets. Place attachment (Altman & Low, 1992), place identity (Proshansky, 1978) and place dependence (Stokols & Shumaker, 1981) are the constructs that appear most often in the literature of environmental psychology. Shamai<sup>2</sup> has put forth that these place concepts and similar others can be included under the single umbrella term “sense of place”. (Jorgensen & Stedman, 2006)

### Sense of Place

Place is a multifaceted phenomenon consisting of the experience and evaluation of the various specifics of a space such as geographical location (place), landscape and individual contributions; the impact of each can be assessed in the person’s sense of place and experience of the environment. Its geographic location will not be enough by itself to create a sense of place. In order to make sense of attachment to place a long and deep experience of the place and preferably personal participation seems essential. Rituals, symbols and myths enhance a sense of place attachment and a person’s deep connection to a place. Datel<sup>3</sup> described sense of place as a complex combination of meanings, symbols and qualities,

<sup>1</sup> Sarah Moos

<sup>2</sup> Shmuel Shamai

<sup>3</sup> Robin Datel

that a person or group of persons (consciously or unconsciously) associates with a location or particular area. (Shamai, 1991)

According to Relph<sup>4</sup>, sense of place can be created in one place, and can last for a person's lifetime. Canter<sup>5</sup> has said that the values of the person or the group have an effect on sense of place and sense of place can have a similar effect on a person or group's values and outlook. People generally participate in social activities based on their sense of place. Sense of place is actually a combination of man's relationship with his internal image and the physical characteristics of his environment. This concept is on one hand based on a person's subjective experience of a place (memories, customs, culture, history and society) and on the other hand their objective experiences (landscape, smell, sound) which leads to the establishment of a relationship with a place. In fact it appears that sense of place is a complex phenomenon made up of emotions and attachment to a man-made environment that is formed by the acceptance and participation of people in such places. This means that sense of place is not predetermined but is created from the interaction between people and places. Sense of place in people encourages participation and enjoyment in the place they live and work in and interaction with the environment. (Department of Commerce State of Washington, 2012)

Sense of place includes both the descriptive and emotional aspects of experiencing the environment. This means that the concept of sense of place is both a physical and a psychological concept. An environment is made up of both social and physical parameters and therefore the communication between man and the environment is reciprocal. Humans perceive different meanings (positive and negative) from their environment which in turn gives it meaning. According to Steele<sup>6</sup> sense of place consists of all the experiences of things people derive from a place and that is why in theoretical literature the factors that make up sense of place are divided into two groups, perceptual and cognitive as well as physical. (Steele, 1981) Cognitive factors include the meaning a person stems from a place and that's why we believe a person cannot only feel sense of place because of the cognitive meaning, derived from the place, is based on their own personal identity. In other words, it can be understood that different people will perceive different senses based on their own personal experience, motivation and outlook along with the physical properties of the environment.

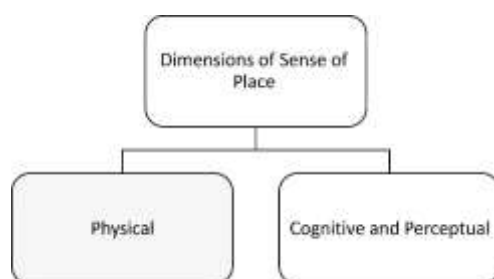


Figure 2-Dimensions of Sense of Place from the Perspective of Steele

Jorgensen in his own research on the subject of Behavior Theory, proposed the following three dimensions for sense of place: (Jorgensen & Stedman, 2001)

1. Peoples feeling about a place, giving shape to the emotional dimension
2. Peoples beliefs about a place, giving shape to the cognitive dimension
3. Peoples function in a place, shaping the behavioral dimension

According to Canter, components of place are shaped by its meaning, form and function; (Canter, 1997) and so the combination of the latter three theories will give us the model for human-environment interaction.

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<sup>4</sup> Edward Relph

<sup>5</sup> David Canter

<sup>6</sup> Fritz Steele

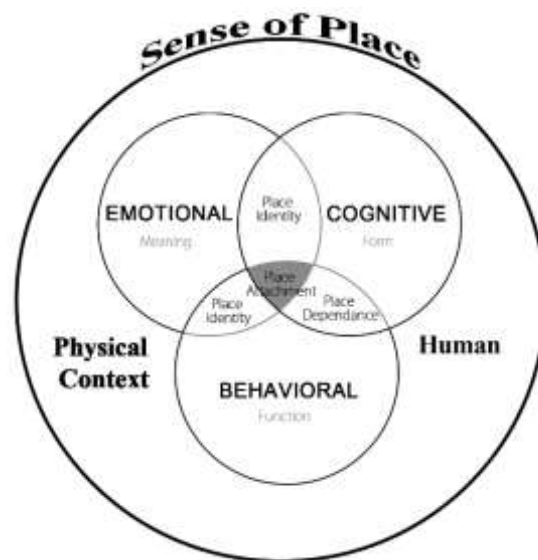


Figure 3-The Dimensions of sense of Place from the Perspective of Jorgensen, Canter & Steele

Studies show that not only do the physical characteristics of a place distinguish it from other places it also has an effect on people's perception. According to Steele the physical characteristics listed below have the most effect on sense of place.

Dimensions of Space	Decoration
Scale	Color
Components	Smell
Texture	Sound
Variety	Temperature

He also believed these components were effective in establishing a relationship between human and his environment.

Identity	Mystery
Vitality	Pleasantness
Memory	Amazement
History	Safety
Entertaining	

Physical properties in addition to fulfilling the functional purpose of place should also be able to assist with the formation of sense of space (sense of attachment to place) by developing unique meaning and character. In this regard, legibility and satisfaction of the people with the components of the environment, have been recognized as important factors. With an understanding of meaning, concepts, symbols and identity the relationship between cognition and place takes form. Bradley and Stedman<sup>7</sup> believe sense of place is signified by several dimensions made up of the particular ideas and beliefs of the place (place identity), feelings (place attachment) and behavioral commitments (place dependence). Place identity is representative of the beliefs and ideas that will be introduced to the person by his relationship with that place. Place attachment is related to the positive emotions a person gets from a place and place dependence is related to the behavioral advantage a person gets from a place. Stedman believes the concept remains vague and since it is very difficult to define, measure and evaluate it is better to analyze concepts such as place attachment or place dependence. (Stedman R. C., 2003)

Social, physical, and personal indicators, such as community participation, low crime rates and occupancy rates, are predictors attributed to the formation of sense of place. According to Jones, sense

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<sup>7</sup> Bradley S. Jorgensen and Richard C. Stedman

of place is a concept similar to sense of belonging with the difference being that sense of place points to the effective relationship between a person and place; while sense of belonging is related to the relationship between the human and the environment during the process of experiencing the place. (Jones, Patterson, & hammitt, 2000)

### **Sense of Belonging**

Sense of belonging is a theory in cultural psychology which was first introduced by American psychologist Abraham Maslow. (Xu & Kai, 2012) According to Maslow, sense of belonging appears whenever physiological and safety needs are met which will lead to a man's quest for membership in a particular group. In his opinion, sense of belonging is a subjective sense in that the more a person believes his needs will be met by the system or a particular group, the greater sense of belonging he finds. (Anant, 1966) Sense of belonging refers to the amount of acceptance by a person or group in relation to a special thing or phenomenon along with the degree of intimacy they show. Feelings are poorly understood but it has a subjective quality that affects people's behavior. (Xu Z. , 2010) Sense of belonging as a psychological sense is considered a median variable between the subjective truth and the objective external environment along with the corresponding behavior of humans with respect to it. (Zhang & Lvchuan, 2014) In order for a person to experience sense of belonging there needs to be enough energy and a desire and interest for meaningful participation along with the potential for the formation of sense of belonging through common characteristics, complementary to his surroundings. (Hagerty, Lynch-Sauer, Patusky, Bouwsema, & Collier, 1992)

Foruzandeh and Motalebi<sup>8</sup> divide sense of belonging factors into three categories, perceptual-personal cognitive, social and environmental-physical. Through this approach environmental-physical category will consider the two factors of activity and physical context considering place-behavior theory. By this theory the physical context of this category is composed of form and structure. (Forouzande & Motalebi, 1390) In the same study and based on the proposed ranking for sense of belonging to place, place attachment was introduced as one of the levels of sense of belonging ranked number two, while sense of belonging in the theory of attachment proposed by Green (1999) was mentioned as a subset of place attachment. (Green, 1999)

### **Levels of sense of place:**

Shamai described sense of place as having three phases, belonging to place, attachment to place and commitment to place. These can be expressed in the seven levels listed below:

1. Not having a sense of place
2. Knowledge of being in a place: In this level people know they live in a particular place, recognize the symbols of the place but do not have any feelings of being bound to the place.
3. Belonging to a place: Not only being familiar with a place but having a sense of belonging to a place. In this level the symbols of a place are not only known but respected.
4. Attachment to a place: In this level there is a higher degree of emotional attachment to a place. The place becomes meaningful and special and finds a unique character and personality.
5. Identifying with the place goals: When a majority of the people in a place can identify the place goals.
6. Participation in place: In this level the person plays an active role in the place. He is ready to use his own resources like money, time and talent for the benefit of place oriented activities.
7. Sacrifice for a place: This final and ultimate level of sense of place contains the deepest commitment to a place.

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<sup>^</sup> Ali Forouzande and Ghasem Motalebi

Table 1- The levels of sense of place from the perspective of researchers

Levels of Sense of Place				
Edward Relph	David Hummon	Jennifer E.Cross	Shmuel Shamai	Shmuel Shamai
Existential Insiderness	Ideological rootedness	Biographical	Belonging to place	Not having a sense of place
Existential Outsideness	Place relativity	Spiritual	Attachment to place	Knowledge of being in a place
Objective Outsideness	Place alienation	Ideological	Commitment to place	Belonging to a place
Incidental Outsideness	Placelessness	Narrative		Attachment to a place
Behavioral Insiderness		Commodified		Identifying with the place goals
Empathetic Insiderness		Dependent		Participation in place
Vicarious Insiderness				Sacrifice for a place

**Attachment Theory:**

Attachment theory is a joint work by John Bowlby and Mary Ainsworth which changed our way of thinking about a child’s bond to its mother and the disturbance that occur when this process is interrupted via deprivation or accident. (Bertherton, 1992) Attachment theory is a psychological model that attempts to explain the dynamic of lengthy interactions between human beings. (Grossmann & Waters, 2005) The theory attempts to describe human reactions in relationships, when they are confronted with difficulties, lack of attention or feelings of unsafety. In fact attachment depends on the human ability to build trust in themselves and what watches over them. (Levy & Orlans, 2014)The literature on attachment can basically be summarized in four divisions of social, place, neighborhood, and city.

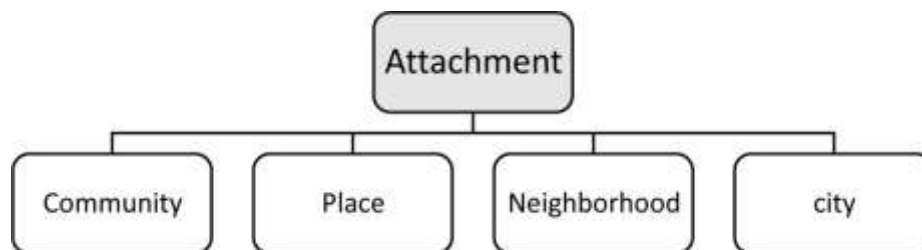


Figure 4-Types of Attachment

More than twenty years since the first publication of the book “Place Attachment” by Altman & Low in the year 1992 has passed. Ten years earlier in the year 1981 the first definition of Place Attachment was put forth by Stokols and Shumaker (Stokols & Shumaker, 1981). In the same year the first typology was proposed by Riger and Lavrakas (Riger & Lavrakas, 1981). In 1985, another definition of attachment to place was raised by Taylor, Gottfredson and Brower, (Taylor, Gottfredson, & Brower, 1985) and about ten years before that in 1974 until 1980 human geographers Buttimer, Relph, Seamon and Tuan turned their attention to introducing the importance of significant differences between abstract spaces and place. Tuan expanded our understanding of attachment to place with the introduction of the two concepts called “topophilia” and “geopiety”. (Wickham, 2000) At the same time, in 1974, Kasarda and Janowitz presented a report on the first survey completed about important factors affecting human relationship with places, (Kasarda & Janowitz, 1974) ten years after Marc Fried research on psychological consequences of forced migration. (Fried, 1966)

## Place Attachment

Since the 1980's more than ever the concept of attachment was beginning to take shape in environmental literature especially in relation to the home and the neighborhood. Only since the 90's has the attention of theorists been drawn in particular to human's relationship with his environment. The term place attachment is made up of the two terms place and attachment. The word "attachment" has Latin origins that literally means the act or process of being attached to something or someone. (Baergen, 2005) In fact it means a strong dependence. In another research it has been defined as the physical connection to something like human, place, neighborhood or city. (Elliott, 2012)

According to some writers and researchers a sense of community includes the smaller concepts such as place identity, attachment to place and belonging to place. (Stedman R. , 2002) Karsada believed place attachment is worth studying in the fields of city, neighborhood, and home, (Kasarda & Janowitz, 1974) and from the research of Woldoff place attachment is dependent on social characteristics of the community. (Woldoff, 2002) This is while Stokols sees it as based on physical characteristics (Stokols & Shumaker, 1981) and Riger saw it as dependent on both. (Riger & Lavrakas, 1981)

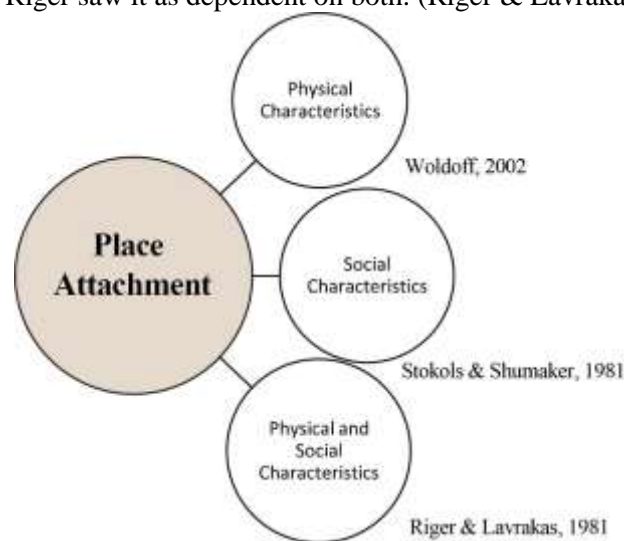


Figure 5-Characteristics and Traits Effective on Place Attachment

Altman and Low see place attachment as the positive bond between people and place. (Altman & Low, 1992) Manzo and Wright in the book *Place Attachment (Advances in Theory, Methods and Applications)* defined place attachment as the bond that is established between a person and his surrounding environment. This interaction is one of the powerful aspects of human life that has awakened our sense of identity, gives our life meaning, facilitates our communities and affects our performance. Place attachment consists of the positive interaction between man and space which often occurs subconsciously and without the knowledge of the person. This interaction and communication is created in time through the behavioral, cognitive, and emotional interaction of a person or group with the surrounding physical-social environment. (Mihaylov & Perkins, 2015) According to a framework proposed by Manzo & Perkins (2006) place attachment falls underneath place category within the emotional domain.

Table 2-A framework for organizing psychological concepts that focuses on community in both its physical and social aspects (Manzo & Perkins, 2006)

	Place (Physical aspect)	Community (Social aspect)
Cognitive	Place Identity	Community Identity
Emotional	Place Attachment	Sense of Community
Behavioral	<ul style="list-style-type: none"> <li>Participation in Neighborhood Planning</li> </ul>	<ul style="list-style-type: none"> <li>Neighborhood Activities</li> </ul>



	<ul style="list-style-type: none"> <li>• Protection and Improvement</li> </ul>	<ul style="list-style-type: none"> <li>• Participation in crime prevention</li> </ul>
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The dimensions of place attachment and predictors of place attachment are two different concepts which sometimes overlap one another. Dimensions mean the type of attachment and the reasons for its formation and generally it is measured and researched with direct questions and the use of special criterion to measure place attachment along with a special standard that represents the physical and social features of place. Predictors in contrast to dimensions are elements that are studied individually apart from feeling; and even if a positive correlation between the intensity and the predictor of attachment is found, a person does not have to be aware of the existence of this relationship. Another difference between predictor and dimension is that in a place where predictors help highlight the possible mechanisms for the creation of place attachment, dimension tries to review place attachment as the contributing factors in place specific behavior.

Table 3-predictors of place attachment (Kamalipour, Jeddi Yeganeh, & Alalhesabi, 2012)

Dimension	Value	Predictor
Physical	Positive	Physical sustainability, Functional sustainability, Unique characteristics, Accommodating activities, Comfort, Open spaces, Safety, Accessibility, Vitality, Diversity, Legibility
Social	Positive	Length of residence, Number of relatives, Ownership of the property, Reputation of the place, Daily encounters, Physical personalization, Beliefs and religions, Collective behaviors, Social control, Low fear of crime
Physical	Negative	Unfit development, Changing physical setting, Changing types of uses, Changing activities, Lack of meaning, Formal globalization, Economic globalization
Social	Negative	Cultural globalization, Crime growth, Weakening identity, Lack of social contributions, Immigration

### Place Attachment and Sustainable development

As described in the last section, place attachment affects the neighborhood within the two category of physical and social dimension through the behavioral aspect of people's interaction with the neighborhood. One of the dimensions of social sustainability is participation of residents in the planning of the neighborhood and the willingness to make changes to the surrounding environment and put time and effort toward activities inside the community along with contributing money, time, and expertise towards decreasing environmental issues and increasing safety. Place attachment results from the social sustainability of a place. (Kamalipour, Jeddi Yeganeh, & Alalhesabi, 2012)

The world commission on environment and development states that sustainable development should ensure that the present development meets the needs of today without compromising the ability of the future generation to meet their own needs. (World Commission on Environment and Development, 1987) Sustainable development comprises three fields of environmental, social, and economic sustainability.

Place-Attachment brings environmental consciousness: people who feel they belong to a place want to conserve and sustain the components of that place's features. The built environment has a great effect on this behavior through the features of scale, street morphology, diverse mixed-use, pedestrian walking distances or the borders of the neighborhood. The weaker the place-attachment, the more awareness of the environment is seen. (EREN, 2013)

Place-Attachment brings social vitality: The set of relationships, capacity and creativity that exist in a neighborhood that helps the community as a whole to sustain itself, solve common problems, and to express its unique identity. (scott, 2010) Indicators of such dimension could be named as social participation, perception of safety, respect for diversity, sense of belonging, volunteering, number of close relatives, providing assistance to others, walking alone after dark.

**Place Dependence (Functional Attachment)**

Place dependence as the opportunities that a place provides for individual goals and activities. A person or group is dependent on a place through the functional elements attached to a place. For example, a bike rider is dependent on the function of his need for a place that provides him the opportunity to ride his bike. Stokols and Shumaker believe that there are two factors that based on them determine the amount of a person’s dependence on place. The first is the quality of interaction with a space and the second is the calibre of its quality in comparison to similar places. (Stokols & Shumaker, 1981) A person’s interaction with an environment especially depends on his physical relationship with that environment. The evidence suggests that physical experience of a space is an important factor in the formation of place attachment. (White, Virden, & Van Riper, 2008)

Physical characteristics of an environment not only serve to distinguish one place from another but also affects the meanings a person perceives from a place. Dependence and attachment are different in that the intensity of dependence can be negative, as well as the intensity of the relationship can be formed based on functional rather than general objectives, and for this reason it is referred to as the functional structure of sense of place.

**Methodology**

After a review of completed research and studies we have come to the conclusion that research methods in the field of place attachment can be divided into two groups, qualitative which has its roots in geographical analysis of sense of place and psychometric (quantitative psychology) which has its roots in basic social studies.

This research by utilizing first hand resources on place attachment requires an analytical descriptive approach; which involves investigating the various theories, definitions and viewpoints on sense of place and in particular, place attachment. Accordingly, this research with its analytical descriptive approach will be attempting to define place attachment and then seek to identify the relationship between place attachment and sustainability. It will try to identify the effect of each one by examining components extracted from the Jolfa neighborhood in Isfahan. According to this research approach, sample selection and data collection, will be collected and classified with reliance on observation, surveys and public participation.

Lens model is a method used to identify the relationship between the environment and human behavior. The basic rules for the model were introduced by “Egon Brunswick” and then developed further by “Kenneth Hammond”. According to Hammond, psychology should be involved in describing behavior not with the discovery of the laws of behavior.

*Table 4-Evolution of the model over time*

Lens Model		
Year	Philosopher	Use of Model
1955	Brunswik	The development of models for studying visual perception
1998	Juslin	Senses

2001	Bernieri & Gillis	Close and harmonious communication that enables groups or affected individuals, understand each other's thoughts and actions and therefore interact.
2001	Reynolds & Gifford	Intelligence

There are elements in the environment that are related to the independent variable. Independent variables within the lens are called cues. Research participants provide us with their opinion on topics that give us information about the independent variable.

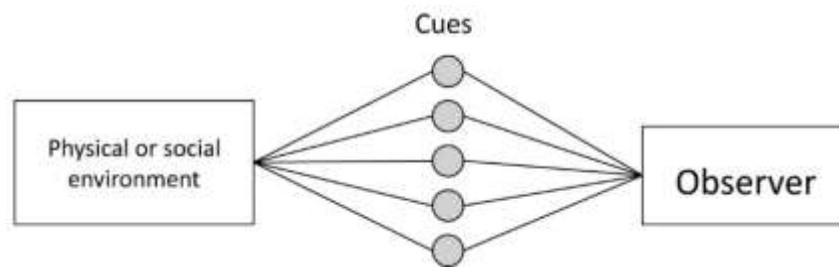


Figure 6-Lens Model

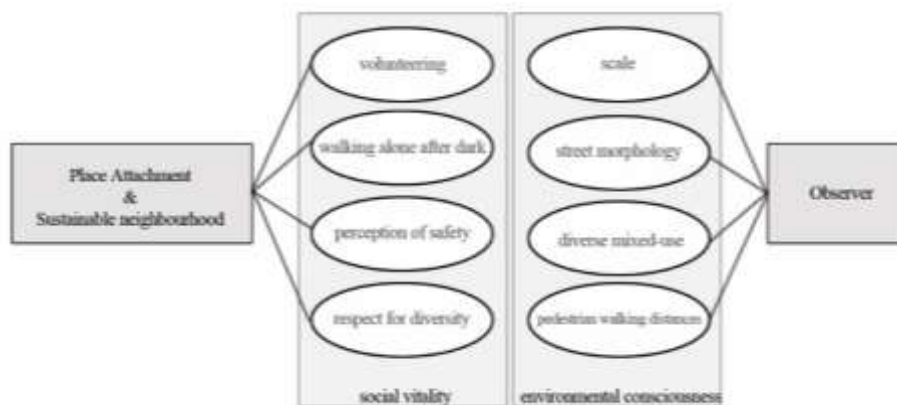


Figure 7-Research model

## Conclusion

The objective of this research is to identify the predictors of place attachment affective toward creating sustainable neighborhood and identify the degree in which each predictor affects sustainability. The findings indicate a significant attachment to the neighborhood, which contributes to the persons' tendency to remain in the community. Also, physical dimensions of attachment are regarded as essential in developing place dependence resulting in attachment.

According to the findings, neighborhood attachment is of higher importance than home and city attachment, while home attachment is more significant than city attachment. The research indicates that place attachment physical predictors along with social predictors contribute to the formation of a social sustainable neighborhood, while the physical predictors have a higher degree of influence towards forming a will sustained social content within the community.

Jolfa neighborhood within the 5<sup>th</sup> district of Isfahan city, with its historic background and population diversity shows a significant community attachment, and physical predictors play the most prominent role in people's attachment to the neighborhood. As expected from past research, long-term inhabitants

and home owners developed a more positive overall place attachment by social predictors through time while newcomers develop attachment through the physical predictors of neighborhood. Home owners and inhabitants of the neighborhood consider physical predictors as a necessary factor for the attachment to shape among the new generation.

## References

- Altman, I., & Low, S. (1992). *Place Attachment*. New York: Plenum Press.
- Anant, S. (1966). The Need to Belong. *Canada's Mental Health*, 14, 21-27.
- Baergen, N. R. (2005). *Manual of Benirschke and Kaufmann's Pathology of the Human Placenta*. Springer Science & Business Media.
- Bertherton, I. (1992). The Origins of Attachment Theory: John Bowlby and Mary Ainsworth. *Developmental Psychology*, 28, 759-775.
- Canter, D. (1997). The Facets of Place. In G. T. Moore, & R. W. Marans, *Advances in environment, Behavior, and Design: Toward the Integration of Theory, Methods, Research, and utilization* (Vol. 4, pp. 109-147). New York: Plenum.
- Department of Commerce State of Washington. (2012). *Sense of Place: A Discussion Paper of Energy Aware Communities*. Retrieved from <http://www.commerce.wa.gov/Documents/GMS-Sense-ofPlace.pdf>
- Elliott, S. (2012). *Not My Kid: What Parents Believe about the Sex Lives of Their Teenagers*. NYU Press.
- EREN, İ. Ö. (2013). Can place-attachment provide cultural sustainability? Empirical research on Turkish neighborhoods 'mahalle'. *ITU A/Z*, 10(1), 138-158.
- Forouzande, A. J., & Motalebi, G. (1390). Definition of sense of belonging to place and its constructing factors. *Hoviate Shahr*, 27-38.
- Fried, M. (1966). Grieving for a Lost Home: Psychological Costs of Relocation. In Q. W. James, *Urban Renewal: The Record and the Controversy* (pp. 358-378). Massachusetts: The M.I.T. Press.
- Green, R. (1999). Meaning and Form in Community Perception of Town Character. *Environmental Psychology*, 19, 311-329.
- Grossmann, E. K., & Waters, E. (2005). *Attachment from infancy to adulthood: The major longitudinal studies*. New York: Guilford Press.
- Hagerty, B., Lynch-Sauer, J., Patusky, K., Bouwsema, M., & Collier, P. (1992). Sense of belonging: A vital mental health concept. *Archives of Psychiatric Nursing*, 6(3), 172-177.
- Jones, C. D., Patterson, M. E., & hammitt, W. E. (2000). Evaluating the construct validity of sense of belonging as a measure of landscape perception. *Leisure Research*, 32(4), 383-395.
- Jorgensen, B., & Stedman, R. (2001). Sense of place as an attachment: Lakeshore owner's attitudes toward their properties. *Environmental Psychology*, 21, 233-248.

- Jorgensen, S. B., & Stedman, C. R. (2006). Sense of place as an attachment: Lakeshore owner's attitudes toward their properties. *Environmental Psychology, 21*, 233-248.
- Kamalipour, H., Jeddi Yeganeh, A., & Alalhesabi, M. (2012). Predictors of Place Attachment in Urban Residential Environments: A Residential Complex Case Study. *Social and Behavioral Sciences, 35*, 459 – 467.
- Kasarda, J. D., & Janowitz, M. (1974). Community Attachment in Mass Society. *American Sociological Review, 39*, 328-339.
- Levy, M. T., & Orlans, M. (2014). *"Corrective Attachment Therapy" Attachment, Trauma, and Healing: Understanding and Treating Attachment Disorder in Children and Families* (2 ed.). London: Jessica Kingsley.
- Manzo, L. C., & Devin-Wright, P. (2013). *Place Attachment: Advances in Theory, Methods and Applications*. Routledge.
- Manzo, L. C., & Perkins, D. D. (2006, May). Finding Common Ground: The Importance of Place Attachment to Community Participation and Planning. *Journal of Planning Literature, 20*(4).
- Mihaylov, N., & Perkins, D. D. (2015). Community Place Attachment and its role in Social Capital Development in Response to Environmental Disruption. In L. C. Manzo, & D. D. Perkins, *Place Attachment: Advances in Theory, Methods and Research*. Routledge.
- Moos, S. (2009). *Analyzing the Interconnectedness Between Space, Place, and Human interaction with the Natural Environment: "Ecological Reawakening: Organic DNA and Evolution"*. Scripps Senior Theses, Claremont Colleges. Retrieved from [http://scholarship.claremont.edu/scripps\\_theses/9](http://scholarship.claremont.edu/scripps_theses/9)
- Proshansky, H. M. (1978). The City and Self-Identity. *Environment and Behavior, 10*(2), 147-169.
- Riger, S., & Lavrakas, P. J. (1981). Community ties: Patterns of attachment and social interaction in urban neighborhoods. *American Journal of Community Psychology, 9*, 55-66.
- Scannell, L., & Gifford, R. (2010). Defining Place Attachment: A tripartite organizing framework. *Journal of Environmental Psychology, 20*, 1-10.
- scott, k. (2010). *Community Vitality*. Canadian Council on Social Development (CCSD).
- Shamai, S. (1991). Sense of place: An Empirical Measurement. *Geofmm, 22*(3), 347-358.
- Stedman, R. (2002). Toward a Social Psychology of Place. *Environment and Behavior, 34*, 561-581.
- Stedman, R. C. (2003). Is it really just a social construction? The contribution of the physical environment to sense of place. *Society and Natural Resources, 16*, 671-685.
- Steele, F. (1981). *The Sense of Place*. Boston: CBI Publishing.
- Stokols, D., & Shumaker, S. A. (1981). People in Places: A transactional view of settings. In J. H. Harvey, *Cognition, social behavior, and the environment* (pp. 441-488). New Jersey: Hillsdale.

- Taylor, R. B., Gottfredson, S. D., & Brower, S. (1985). Neighborhood Naming as an Index of Attachment to Place. *American Journal of Community Psychology*, 13, 525-542.
- Walsh, B. W. (1988). *Theories of Person-Environment Interaction: Implications for the College Student*. Iowa: The American College Testing Program.
- Wickham, T. D. (2000). *Attachments to Places and Activities: The Relationship of Psychological Constructs to Customer Satisfaction*. Pennsylvania: The Pennsylvania State University, College of Health and Human Development.
- Woldoff, R. A. (2002). The Effects of Local Stressors on Neighborhood Attachment. *Social Forces*, 81, 87-116.
- World Commission on Environment and Development. (1987). *Our Common Future*. New York: Oxford University Press.
- Xu, Z. (2010). *Influence Factors of Community Attachment: Urban Residents' Community Acceptance and Satisfaction*. Ning Xia University.
- Xu, Z., & Kai, C. (2012). Development and Psychometric Analysis of the Community Attachment Questionnaire. *Value Engineering*, 276-278.
- Zhang, A., & Lvchuan, L. (2014). The Influence Factors of SNS Users Sense of Belonging: Theoretical Model and Empirical Test-A cross-Culture Study on SNS. *PACIS 2014 Proceedings*. Retrieved from <http://aisel.aisnet.org/pacis2014/245>