

The Role of Architectural Design in Formative Model of Neighboring

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ABSTRACT

Relations between the neighbors have been reduced with the development of modern architecture and urbanism, and is emphasized the need for research on this issue. The purpose of this essay is a detailed study of the concept of neighboring in housing and then determines the role of architecture in influencing on the formation of this concept. In this regard, a comprehensive review conducted about the literature in the human sciences related to architecture then each of the main concepts and theories have been unpacking and classified the different definition of theorists. After that are presented a comprehensive model that encompasses the formative indicators of neighboring and finally, the architecture is discussed in predicting this concept.

KEYWORDS: Formative model; Neighboring; Neighborliness; Architecture

INTRODUCTION

Demystification of the concept of neighboring

The demystification of the notion is required to discuss about neighboring issues in the current situation. Today, neighboring is blurred and obscured issue at least in the literature of architecture and urbanism and cause of this issue is that can be seen the different aspects of geography, sociology, environmental psychology etc within this context and its indicators.

Neighboring, neighborhood or neighborliness?

When is used the word *neighbors*, are concerned people who live near each other. In fact, the main ingredient for the term *neighboring* is proximity. Proximity is different from the propinquity. Proximity is a word within the meaning of propinquity and its focus on the physical aspects, but propinquity can address both physical and psychological aspect of the proximity. In fact, the proximity is primary basis for the neighboring and propinquity (or psychological proximity) is complementary to the next processes.

The word "*neighborhood*" that should be defined geographical concept and is not considered in this essay. Neighborhood means an urban geography that have been started mainly with theories of Clarence Perry in the twentieth century and include a much larger range than scale of neighboring that is approximately 800m radius and includes 1200-1500 dwelling units. This is an urban division and is less consist of the social and psychological dimensions.

The term *neighboring* generally refers to the obvious and visible relationships between neighbors and when researcher is consider to the relations among neighbors, in fact, his focus is on the concept of neighboring. Relations between the neighbors are expression of interactions either quantitative or qualitative that make up the neighboring (Bulmer, 1986, 21).

Perspectives about neighboring to 80s

Problems of modern architecture and urban development became more evident since the end of World War II and with the rise of construction. The researchs on the social impacts of construction began immediately after World War. There are Leon Festinger, William White, Herbert Gans and other researchers that emphasis on the affecting on environmental factors in community.

The idea of a social space was introduced for the first time in 1933 by modern sociologists (Emile Durkheim) and was more complete by Maxim Han. He defined the idea of a set of physical regions according to the feeling of the residents of these areas and knows social environment as a clear character that live nearby. Festinger et al are aware of the social contact as a starting point for the other processess and they are considered three factors as their components: proximity to others, appropriate space to interact and opportunity for passive social contact (Festinger et al., 1950) (Figure 1).

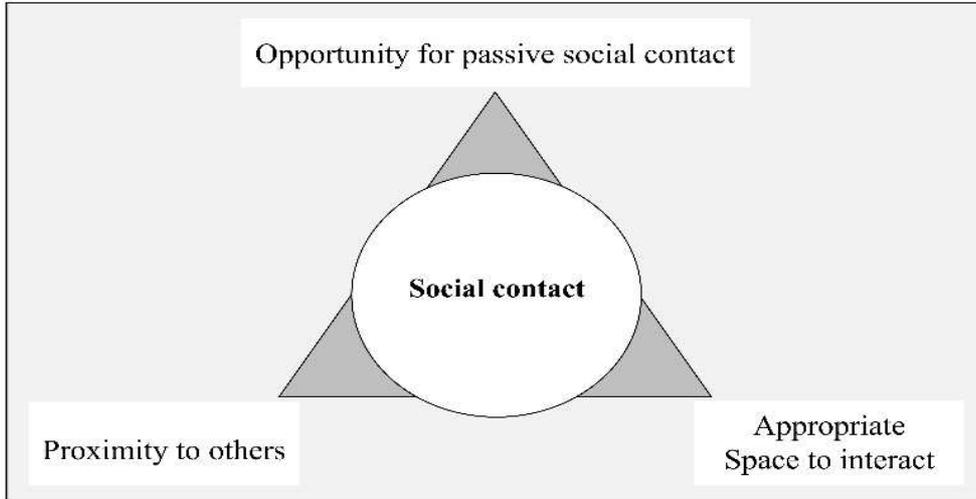


Figure 1: Social contact based on (festinger et al., 1950)

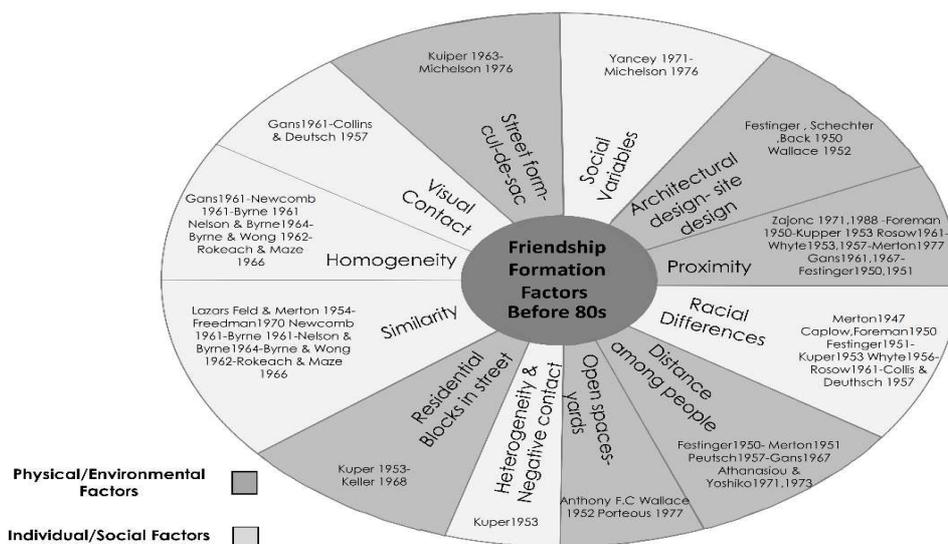
The researches of Festinger et al was conducted on the Westgate area and showed that people began to form informal groups after the residency and are located in these groups under social pressures. Leon Festinger was a student of Kurt Lewin who was basically a Gestalt/ environmental psychologist. Festinger had the fine architectural perspective and was emphasized on the role of architecture in the formation and membership of social groups (Festinger, 1951).

Peter Mann was the first person who used the term of neighborliness and stated that are called neighborliness as a form of behaviors of the interactions among neighbors that includes a small number of close people (Mann, 1954).

Herbert Gans in Levittown study found that spatial proximity is just one of the factors of establishment of social interactions and this type of social relations is important when newly arrived families in a suburban needs for support from other neighbors (Gans, 1967).

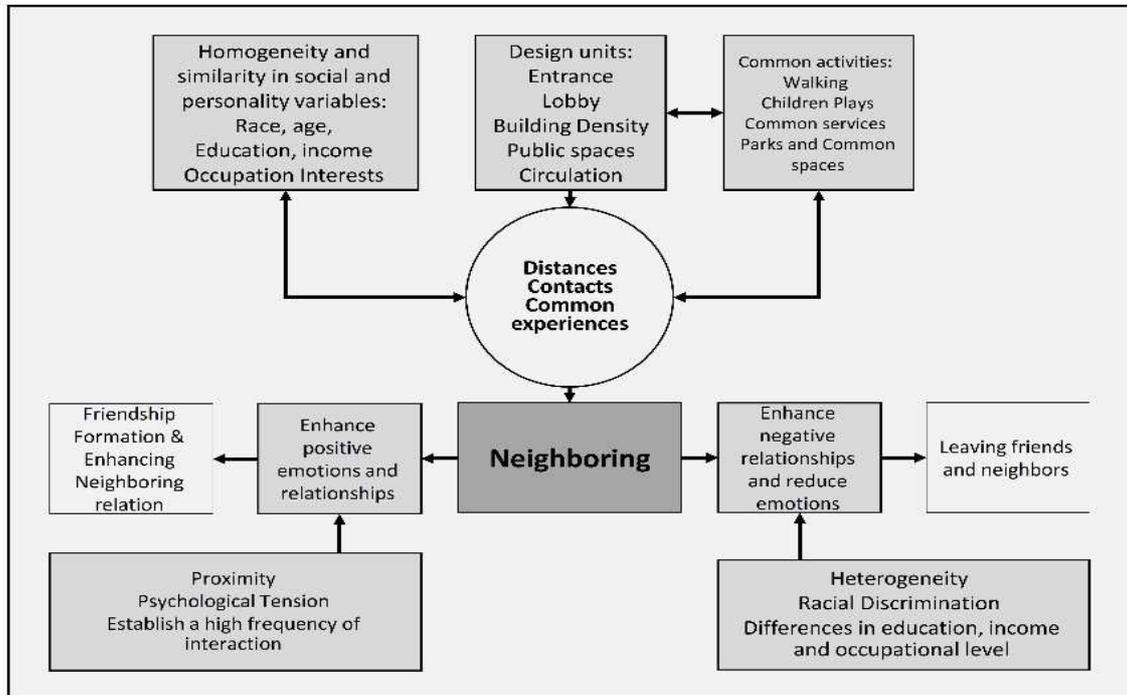
Athanasiou & Yoshiko have studied the effect of lifestyle variables, expressions, and conditions on the distance between the homes of friends and their friends in geometry form. (Athanasiou & Yoshiko, 1973), however, Festinger found that the front door of the house from 4 to 5, the neighboring is largely reduced (Festinger, 1951).

Numerous studies was formed on common spaces, the location of houses doors opposite each other, shared access routes and other architectural design variables that often does not lead to design guidelines but most researchers agreed about the positive role of single-family houses and hierarchy in urban design. (Figure 2)



(Figure 2: Different variables related to friendship formation, ref: authors)

It looks like that researcher has emphasized on enhance friendship (not acquaintance) and strong social ties until the 8 decade and after World War II. Creation of social homogeneity in terms of job and in this direction has been the creation and building of settlements for military as well as teachers etc. Urban theories regarding residential neighborhoods, Sociological theories, the social psychology of groups and their interactions and environmental research and psychological theories of public spaces often will confirm one side of this issue. It's worth noting that after a decade and a shift from strong ties to weak ties as well as the approaches of other researchers changed. (Figure 3)



(Figure 3: Neighboring in view of researchers in the 80s, ref: authors)

Neighboring components in view of Unger & Wandersman

Probably the first comprehensive view at the most recent issue of neighboring is Unger & Wandersman's perspective that has been the focus of many researchers. These researchers at the University of South Carolina put together the interdisciplinary literatures in the field of social psychology, environmental psychology, community psychology and sociology and define three main components of neighboring (Unger & Wandersman, 1985).

The first part of the neighboring is the social aspect of it is that including emotional support, instrumental and informational that make up the total social support and social networks relationships. Emotional support leading to a decrease isolation and increase a person entitled to be and support instrumental can borrow or include the mutual aid and informational support increase the amount of their knowledge of the events that leading to a total of social support. The second part of the social aspect of neighboring is neighbor's relationships within their social networks that may be raised in the form of ties to the strong and weak. The second part of the neighboring is the cognitive component that is included the cognitive map, the physical environment and a symbolic link. Cognitive maps are the registered mental images of the environment that are constantly changing. Over time, these maps are more complete and helping the comprehensive understanding of the environment and neighbors. Then, the residents are dealing with personalization, branding and identity to the environment by using the physical features of the environment and in fact are used the physical features for symbolic communications in order to interact others (Unger & Wandersman, 1985).

The third part of the neighboring is the affective aspect that was included in sense of mutual aid, sense of community and attachment to place. Sense of mutual aid is different from supporting behaviors from any neighbors. This sense suggests that if neighbors need help, they can potentially underestimate of other neighbors. Sense of community is composed of membership, influence and impressionable and shared emotional elements that a person have toward community and finally attachment to places is resulting from connect people with activities and their environment that creates a positive emotional bond.

Multidimensional model of Neighboring (MMN)

The main theory that scientific researchers are often referred to as the multiple and various aspects of the neighboring is the Multidimensional measure of neighboring or (MMN) theory. This theory raised by Skjaeveland, Garling and Malend (1996). They have raised four dimensions of supportive acts of neighboring, neighbor's annoyance, attachment to place in a larger scale and finally weak social ties that reach the construction of the questionnaire instrument on the same basis for neighboring (Figure 4).

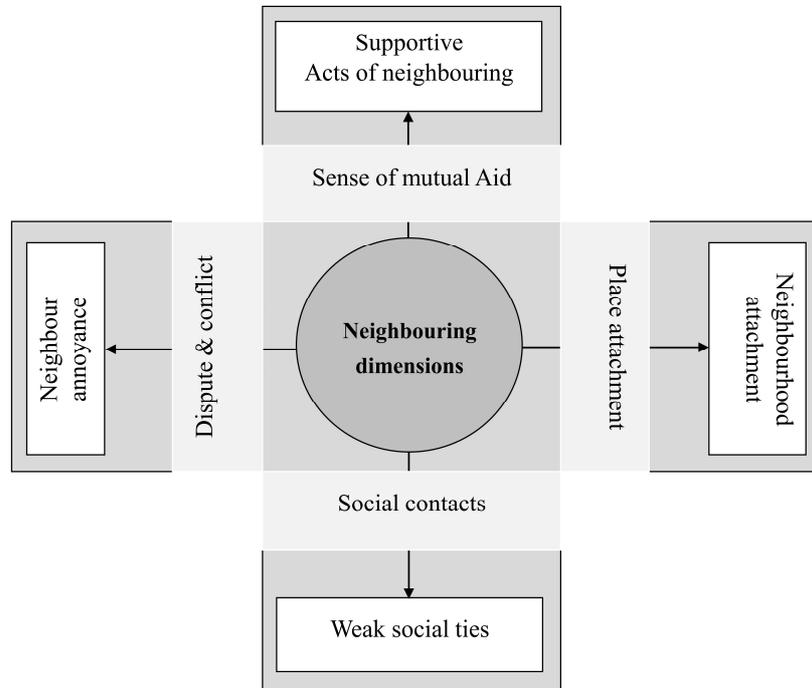


Figure 4: MMN based on (Skjaeveland et al., 1996)

They believe that manifest neighboring in weak social ties and latent neighboring in supportive acts neighboring and attachment to place were considered as negative aspects of the neighboring (Skjaeveland et al., 1996).

Summarize the ideas and definitions of neighboring

The modern lifestyle that has individual autonomy, space of life events, cars and other differences in lifestyle in the past sought different and extensive research on the neighboring. Car is a turning point because it has changed urban scales. However, they began from the beginning of change societies from traditional mode to modern philosophers and sociologists of the nineteenth century and early twentieth century to raised theories of collective life not a particular view on neighboring (Tonnie, 1887) (Durkheim, 1933).

When psychologists in laboratory environments did not get the answer of his question and refer to work in the real world environment, sociologists are interested in urban small-scale like social groups. This issue to be observed in other disciplines such as human geography and urban designing and construction problems are also aggravating the middle of the twentieth century, and it will play a huge role.

In particular, Peter Mann, who rose the terms of neighborliness believes that neighborliness can be as potentially (manifest neighborliness) or as an actually (latent neighborliness) and raised the founder of the modern neighboring in the sociology (Mann, 1954).

After Mann, so many researchers are interested to discuss in the collective life in the areas (Festinger, et al., 1950). William White, Leon Festinger, Herbert Gans and others deal with different variables of collective life (not neighboring). McGahan in 1972 was consider a criteria for neighboring that can be measured through the number of friends in the building, the rate of participation in social events with neighbors etc (McGahan, 1972). Over the course of his research was in higher urban areas and did not have the sufficient validity results. On the other hand, his emphasis on the friendship formation was not consistent with the famous paper about strength of weak ties that insisted on acquaintance instead of friendship (Granovetter, 1973).

Kasarda and Janowitz are raised the concept of friendship in the neighboring (Kasarda & Janowitz, 1974). Carol Silverman in University of Berkeley believes that should not be consider the neighboring in the subsidiary of friendship. He emphasis on ecological research housing (Silverman, 1986), although in these decades, several

studies took on the use of urban spaces and their collective functions, but at first this research did not have the small scale of neighboring and second emphasize on community not social groups.

Unger and Wandersman began to describe the neighboring components for the first time and in addition it has raised the social and emotional components of cognitive neighboring that was connected directly to the built environment (Unger & Wandersman, 1985) of course, they expressing the neighboring as a personal concept in three years ago but have highlighted the role of social support in their subsequent studies (Unger & Wandersman, 1982).

Along with this issues, the friendship formation and neighboring are raised as an antithesis of dispute and conflict neighbors raised and they emphasize the ecological structure of living space and had an effect on the conflict and problems with other neighbors. (Ebbesen et al., 1976) and of course, this issue has also continued and many researchers have known the appropriate neighboring as an avoid dispute or conflict to disturb the privacy of others (Paquin, 1992) (Paquin, & Gambrill, 1994) (Crow et al., 2002).

Granovetter in his article believes that the strength of weak ties (acquaintance) is more important than strong ties (friends) and it was of interest to researchers in other disciplines and in theory (MMN) that was an instrument for multidimensional measure to neighboring that obtained the highest impact on among the four factors (Skjaeveland et al., 1996). In fact, the initial impact of social contacts among other factors such as attachment, sense of mutual aid and dispute and annoyance was higher than the other.

Schnel & Goldhaber defines neighboring as immediately understanding of residential adjacent and Urban divisions (Schnel & Goldhaber, 2001). But some researchers expressed managed distances and proximity of neighbors in creating good and bad neighbors (Bridge et al., 2004) (Crow et al., 2002).

Simultaneously, sense of community rising with these definitions and ideas on a larger scale but its scale in geographical dimension was higher than neighboring scale (small groups) (McMillan & Chavis, 1986) (Sarason, 1974). This is interesting that sense of community is located into neighboring indicators in theory of Unger & Wandersman (1985). Kim and Kaplan knows neighboring as an activity-based concept and highlights their social / psychological aspects and emphasize on role of the physical environment that Talen had asserted earlier (Talen, 1999) (Kim & Kaplan, 2004).

This investigation was the result of the following developments: First, the scale of the neighboring was identified in structure of social groups. Second, the neighboring components extracted according to field research and mutual correlations were investigated. Third, the instrument for neighboring measurements created in social dimensions. Forth, the role of the physical environment is located in different researches (Talen, 1999) (Kim & Kaplan, 2004) (Wilkerson et al., 2012) (Skjaeveland & Garling, 1997) and finally Wilkerson et al. found that if physical environment designed correctly so that their features can increase neighborliness (Wilkerson et al., 2012).

(Table 1: Definition & theories regarding neighboring and neighborliness)

Year	Researcher and theorist	Definitions and theories
1954	Peter Mann	Neighborliness is a behavioral mood that create among their interactions in over time If people makes a social group not an aggregation, which can be manifest or latent.
1972	Mc Gahan	Neighboring is measurable through the number of friends in building, rate of participation in social events with neighbors, the rate of talk about personal problems and borrowing from neighbors.
1974	Kasarda & Janowitz	Neighboring is measurable through the number of friends in the neighborhood.
1982	Unger & wandersman	Neighboring is personal concept that have social/emotional support to residents and residents improving their lives problems through it.
1985	Unger & wandersman	The neighboring is included in social interaction, symbolic interaction and individual attachment and so neighboring has a social, cognitive and affective components.
1986	Silverman	The neighboring is not a subset of Friendship but in the researches should be considered the subjective aspects and ecological characteristics of housing in heterogeneity societies.
1996 1997	Skjaeveland & Garling et al	The neighboring is a multidimensional concept that included in place attachment, social contact, sense of mutual aid and dispute & conflict.
2001	Schnel & Goldhaber	Two definition of neighboring: 1. Immediately understanding of buildings proximities 2. Understanding of the municipal divisions in the social domain, which have the important role in the lives of urban residents.
2002	Crow, Allen and et al	Proximity management and distance in neighborly relations creates concepts of annoying neighbors or good neighbors.
2004	Bridge, Farest et al	Neighborliness addressed to the type of positive and good neighboring but might others interpret it annoyance.
2004	Kim & Kaplan	Neighboring is a concept of components of social interaction and sense of community within the larger context. This concept is activities-based and their social and psychological aspects are strong.
2012	Wilkerson et al	If physical environment design correctly, neighborliness increases.

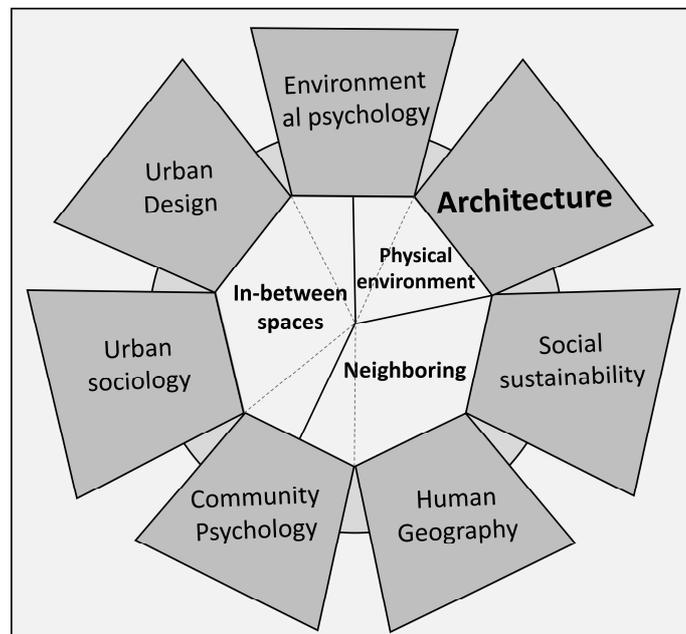
DISCUSSION AND CONCLUSIONS

Architecture and the Human sciences in the neighboring

Architecture is design of space and form that meets human needs. Architecture scale is design of buildings and different complexes in various functions, including housing. Architecture is not a determinant of human behaviors but it is context of them and possibility of their occurrences. Architecture is a set of several variables and when architectural design intersect with theoretical subject (such as interactions among neighbors), the different Human sciences and their researches help architecture and provide necessary theories for design and at least design guidelines.

On the other hand, the physical environment and in-between spaces concepts linked to each other so that their separation from each other is difficult. Architects are in charge of the design of in-between spaces in residential complexes scale and urban designer is responsible for larger scales that include urban furniture. But human events of this area are raised in environmental psychology, human geography and community psychology.

Physical environment as a result of architectural design and psychological impact in environmental psychology on people are studied and in a larger scale in urbanism and its subsidiary sciences are studied. Neighboring as the subject that has been more discussion about the social compared to physical aspects in the past decades and was considered the urban sociologists, community psychology and researchers in the field of sustainability that are interested in issues of social sustainability (Figure 5).



(Figure 5: Architecture & different human sciences in neighboring, ref: authors)

Social/interpersonal versus psychological/environmental aspects of neighboring

Interactions among neighbors or neighboring can be considered from two aspects: First, individuals and their interpersonal interactions formed neighboring from components to the whole and over time. Second, the psychological notion of whole (people and buildings) gives coherence to the neighboring structure.

Neighboring in the area of social/interpersonal are includes in manifest/actual social relationships and potential social relationships of neighbors. Social relationships in the neighboring environment will have positive aspects (strong & weak ties) and negative aspects (annoyances & disputes). Attendance will have social contact, face-to-face relationship and weak ties (acquaintances) and at higher levels for longer interactions, mutual aids and more interactions and strong ties (friendships) by type of activity in the in-between spaces of houses.

On the other hand, the potential social relationships includes supporting functions of neighboring that involves an instrumental support (the real aid), informational support (to be informed of events), and emotional support is. Social support can be either provided or received. Provided Support is potential and emerges in necessary conditions. Received support will be manifested in strong and weak ties of neighbors. With regard to actual and potential aspects of interpersonal relations, can have comprehensive social/interpersonal aspects of neighboring.

Psychological/environmental aspects of neighboring are the imagination of residents from environment and in fact their environmental cognition is included in according to understanding and experiences over time. This cognition is a set of the sense of community of residents to each other and attachment to place.

When it comes to talk about the social aspects of neighboring, its formation as a component to whole (person to the group). Here variables in creating a sense of community and attachment to place in the formation of environmental cognition can be effective (Figure 6).

Activity-based versus meaning-based neighboring

Always the talk of the neighboring, it is necessary to distinction between manifest and potential aspects. When neighbors do manifest activity in relation to the other neighbors, it occurs activity-based neighboring, whether it's the strong and weak social ties (acquaintances and friendships) and whether this activity is the annoyance of other neighbors, such that is the type of neighboring activity. There not has been much research about the amount the impact of manifest and potential neighboring on neighborliness but in the writings of Peter Mann seems that the priority to be with activity-based neighboring (Mann, 1954).

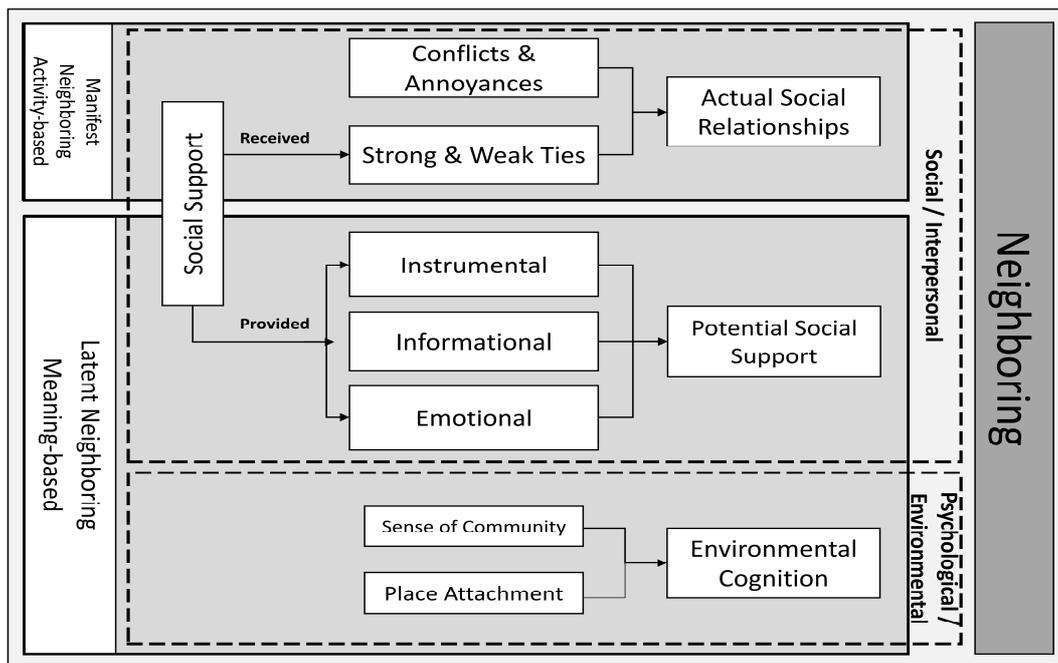
One hand, neighboring has had its meaning aspects. That residents know the other neighbors as own neighbors and in social groups that contain their neighborliness as a potential and significant templates even if have no manifest activity. Here are the three indicators of social support, sense of community and attachment to place are of importance. (Figure 6)

The first factors of shaping the meaning-based neighboring are provided social support. Support that is created as the potential and latent among residents toward sense of mutual aid. The second factor is sense of community that includes different aspect such as individual/collective and physical/psychology and is a sense that resident have toward their community and will have in larger scale toward society. The third factor is attachment to place that is considered as social capital and in fact it includes interest and neighbors ties with their life place (activities, physical features and their relationships).

Comprehensive model for the formation of neighboring

We should differ between formative and reflective model before presenting comprehensive model of neighboring. Formative models contain different indicators that make up the research and the direction of causality in these models is from indicators to construct (Simonetto, 2012) (Saris, 2009).

There is the fundamental difference between predictors in a construct and consequences of the construct that is frequently wrong used by researchers (Lewicka, 2011). For example on health and quality of life in the neighboring can be seen as consequences and should not be used as an indicator of the formation. Model presented here as a formative model of neighboring and present indicators for its formation. Three main indicators of actual social relationships, potential social support and environmental cognition are required for the formation of neighboring (not neighborliness) and there have been separation in activity-based neighboring and meaning-based in bold square template (Figure 6).



(Figure 6: Formative model of neighboring, ref: authors)

Architectural design, context and affecting on neighboring

Architects create physical environmental features by design buildings and spaces in-between them and provide context for social events. Functional and aesthetic aspects of in-between spaces and external walls of buildings will be created or denied these opportunities. In overall scale, the role of architect is effective in factor of the site's design, building, Shapes of building and external wall design and will be provided opportunity for social interactions in small scales like riding and walking trails design, common services, parking and other elements.

With regard to formative model of neighboring, architecture is impact on the latent meaning-based neighboring and the effects of architecture on formation of neighboring are bold in environmental/psychological aspects.

The role of architecture is that did not provide opportunity for social events without having suitable space which includes the essential physical affordances for encourage residents. In fact, architecture provides the context of acquaintances and friendships. On the other hand, the influence of the architecture is also important for creating neighboring, whether positive or annoyance. Each element by architects and their total impacts in terms of mutual interactions are affecting the neighboring. The role of architectural design have been in creating spaces with high people attachment to place in numerous investigations and in fact the architectural design of residential complexes are contexts and affecting on the social/interpersonal aspects and effective on psychological/environmental domain.

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