

DESIGN AND NEIGHBORHOOD SENSE OF COMMUNITY: AN INTEGRATIVE AND CROSS-CULTURALLY VALID THEORETICAL FRAMEWORK

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Abstract

This paper proposes a much-needed integrative and cross-culturally valid theoretical framework for the study and better understanding of the potential impact of environmental design on neighborhood sense of community. It is specifically formulated to address the major problems impeding the progress of this area of research. These problems are first identified. The proposed framework is then outlined. Subsequently, support for the framework is provided through an analysis of the relevant theoretical and research literature.

Keywords:

Culture; environmental design, neighborhood; sense of community.

Introduction

This paper proposes a much-needed integrative and cross-culturally valid theoretical framework for the study and better understanding of the potential impact of environmental design on neighborhood sense of community. It is presented as an important initial step for further theoretical developments and as a guide for future research and design applications.

The current widespread interest in the concept of neighborhood sense of community has been primarily fueled by the revival of the assumptions that “cohesive” neighborhoods or local communities are viable and useful units for the implementation of social and economic development programs (Chaskin, 1997; Schorr, 1997; Rubin, 2000) and that, with the associated “strong” sense of community among their residents, they are important for the general well-being of the individual and the good of the family and the society as a whole (Sarason, 1974; Davidson & Cotter, 1991; Brint, 2001). Indeed, based on more than twenty years of theoretical development of the concept of psychological sense of community within the

field of community psychology (including such work as Glynn, 1981; Riger & Lavrakas, 1981; McMillan & Chavis, 1986; Hill, 1996), research has confirmed a significant positive relationship between neighborhood sense of community and psycho-social dimensions of mental health and levels of subjective well-being (Glynn, 1986; Davidson & Cotter, 1991; Pretty et al., 1996; Prezza & Costantini; 1998).

However, to date, and despite a growing general interest in the use of environmental design as a tool for the enhancement of neighborhood sense of community (Cochrun, 1994; Katz, 1994; Langdon, 1997; Talen, 1999; Hall & Porterfield, 2001), relatively few studies have actually investigated the relationship between physical characteristics of the residential environment and sense of community. And, research has been extremely slow in producing the substantive knowledge necessary for successful design applications (Talen, 2000; Vernez-Moudon, 2000). The framework proposed in this paper is thus specifically formulated to address the major problems impeding the progress of this area of research. These problems are first identified in the following section. The proposed framework is then outlined. Subsequently, support for the framework is provided through an analysis of the relevant theoretical and research literature.

Problems Impeding the Progress of Research

As previously mentioned, to date, relatively few research studies have investigated the potential impact of environmental design on psychological sense of community. These studies have looked at the impact of various

characteristics of the built environment on levels of sense of community in the context of local communities defined at different scales of the residential environment, such as the town (Plas & Lewis, 1996; Kim, 2000), the neighborhood (Nasar, 1997; Wilson-Doenges, 2000), and the apartment building (Zaff & Devlin, 1998) or the college dormitory building (Hill, Shaw, & Devlin, 1999).

Some of these studies have investigated the impact of the design principles of the New Urbanism movement dedicated to the enhancement of sense of community through environmental design (Plas & Lewis, 1996; Nasar, 1997; Kim, 2000). However, these investigations have not led to conclusive findings about the effectiveness of the design principles proposed by New Urbanists (Talen, 1999; 2000). Without appropriate theoretical frameworks, the meaningful interpretation and useful discussion of the apparently contradictory findings that these studies have yielded (compare for example Nasar, 1997 and Kim, 2000) will remain extremely difficult.

Other studies that have looked at the potential impact of environmental design on the psychological sense of community have not been conducted under the umbrella of an identifiable unifying research agenda. Rather, they constitute isolated inquiries about the impact on sense of community of various specific physical characteristics of the residential environment. For example, Wilson-Doenges (2000) compared levels of sense of community among residents of gated and non-gated neighborhoods; Zaff and Devlin (1998) compared between high-rise apartment buildings and garden apartment complexes;

and Hill, Shaw, and Devlin (1999) compared between straight corridor floor design and cluster floor design.

As a whole, research that has investigated the potential impact of environmental design on sense of community has remained largely atheoretical, exploratory in nature. Indeed, studies have been conducted without the clear theoretical articulation of the possible mechanisms through which designed aspects of the environment may affect the psychological sense of community or without any purposive attempt to identify and clarify these mechanisms. Such research cannot be expected to lead to the rapid advances in the understanding of the relationship between the built environment and sense of community needed to inform the current interest in community-oriented design.

Moreover, this research has inherited the problems more generally associated with the inadequate consideration of context specificity in the theoretical development of the construct of psychological sense of community. As argued by Heller (1989) and Trickett (1996), the theoretical development of psychological sense of community within the field of community psychology has been predominantly based on a normative idealized notion of local community that implies the existence of frequent social interaction, intimate ties, and mutual concern and support among residents, as well as strong individual involvement and strong commitment and loyalty to the community (see for example Sarason, 1974; Glynn, 1981; 1986; Riger & Lavrakas, 1981; McMillan & Chavis, 1986; Buckner, 1988). It has tended to ignore a large amount of sociological literature that has demonstrated that the specific nature of local community, or

local social organization, and the nature of the behavioral patterns and members' sentiments with which it may manifest itself vary from one socio-cultural context to another. This has led to questionable measures of psychological sense of community in research as operationalizations of the construct have generally failed to take into account the specific socio-cultural context and, thus, the specific characteristics of the particular referent community with which it is associated (Hill, 1996; Trickett, 1996). In studies such as those cited here, operationalizations of the referent local community have been primarily based on the arbitrary selection of a particular scale of the residential environment (such as the neighborhood or the apartment complex) without any real attempt to verify the correspondence of the selected geographical or physical unit with an identifiable unit of social organization or local community and then to discover the specific characteristics of this local community that are relevant to the context-appropriate measurement of the psychological sense of community.

The lack of integration, referred to above, between the community sociology literature and the more recent community psychology literature is a major source of theoretical and substantive fragmentation (Heller, 1989; Skjaeveland et al., 1996; Talen, 2000). This lack of integration cannot be attributed to the rigidity of artificially delineated disciplinary boundaries alone. A number of problems that characterize the community sociology literature have certainly contributed to such lack of integration.

The community sociology literature is particularly characterized by a definitional problem.

Indeed, the definition of local community is clearly surrounded by disagreement and controversy (Warren, 1978; Chaskin, 1997; Brint, 2001). The local community is generally defined as an observable social entity, typically as a residentially based social group or unit of social organization that manifests itself and is thus observable through sustained patterns of particular social or associational behaviors (Guest & Lee, 1983; Chaskin, 1997; Brint, 2001). However, there is first disagreement about the types of behaviors and social relationships that qualify as manifestations of local community. This has led to the continuing debate in the community literature between proponents of "the loss of community" perspective, proponents of the "community saved" perspective, proponents of "the community liberated" perspective, and proponents of the view that the local community continues to be an important socio-spatial entity but can manifest itself through very different patterns of social behavior or conform to different models – such as the "urban village", the "community of limited liability", and the "organizationally dependent community" – depending on its socio-cultural context (see Wellman & Leighton, 1979; Guest & Lee, 1983; Crenshaw & St. John, 1989; Chaskin, 1997; Brint, 2001). There is also disagreement about the notion of "completeness" – whether or not the local community should be defined as a social entity that has a high degree of autonomy and meets all the needs and requirements of its members (O'Brien et al., 1989). There is as well disagreement about the scales of the residential environment at which local communities can exist – "the size problem" (Warren, 1978).

As a result of the lack of consensus about the definition of local community, research

investigating the potential impact of environmental design on the occurrence of community behavior has evolved into a fragmented body of research, divided into disconnected areas of study, each looking at the impact of characteristics of the built environment on a different type of behavior through which the local community may manifest itself – such as informal social interaction and friendship formation (see review in Talen, 2000), participation in local formal organizations (e.g. Perkins et al., 1990; Perkins et al., 1996), the exchange of help and social support (e.g. Brown & Werner, 1985; Fleming, Baum, & Singer, 1985; Keane, 1991), and territorial behavior or other behavioral mechanisms for the maintenance of social order (e.g. Newman, 1972; Taylor et al., 1984; Perkins et al., 1993; Donnelly & Kimble, 1997). In much of this research, to side-step definition related problems, reference to the notion of local community is implicit rather than explicit. Moreover, studies have been conducted at very different scales of the residential environment – such as the street-block, the housing complex, the neighborhood, or the town – often arbitrarily defined, without agreement whether or not the same phenomena are being investigated, thus further fragmenting this body of research.

Role and Importance of Theoretical Frameworks

In the absence of explicit integrative theoretical frameworks based on clear definitions, research on the potential impact of environmental design on neighborhood sense of community has not been cumulative and has thus been extremely slow in producing the levels of understanding necessary for successful design applications (Talen, 2000; Vernez-Moudon, 2000). The

accumulation of unintegrated findings it has generated and continues to generate may actually be counterproductive (see Rapoport, 1997a).

Theoretical or conceptual frameworks are useful in that they help to think about a subject or phenomenon. And, as they establish linkages between key concepts and between distinct but complementary approaches, order, unify, and summarize existing research findings and other relevant materials, as well as identify gaps and provide direction for new research, they help create an appropriate context for the development of scientific explanatory theories (Rapoport, 1985; 2001). In turn, explanatory theories are extremely important to the progress of scientific understanding and, consequently, in the particular case of the science of environment-behavior studies, to the application of research to environmental design (Lang, 1987; Rapoport, 1997a; 2000).

The study of the potential impact of the built environment on neighborhood sense of community is thus in need of theoretical frameworks that, such as the framework proposed in this paper, (1) are based on an explicit conceptualization of local community, (2) attempt to integrate the major theoretical and disciplinary approaches, (3) attempt to synthesize existing relevant research findings, (4) clearly articulate the mechanisms through which the built environment may affect the sense of community, and (5) are intended to be valid across socio-cultural contexts.

Outline of the Proposed Framework

As diagramed in Figure 1., the framework relies first on a conceptualization of local community

according to which a particular local community is characterized by three major elements: (1) a specific set of needs, wants, and interests shared by members, (2) specific appropriate or desired behavioral mechanisms through which these needs, wants, and interests are or ought to be fulfilled or pursued, and (3) a spatial or geographical base at a specific scale of the residential environment. This conceptualization of local community is intended to be integrative of the various approaches to and models of local community which dominate the ongoing debate about its nature as a socio-spatial entity and is thus proposed as a solution to the controversies and problems related to the current lack of definitional consensus. It is also intended to be valid across socio-cultural contexts. It is not based on a normative idealized notion of local community. Rather, it is based on a view of local community as a unit of local social organization the characteristics of which may vary from one socio-cultural context to another. It is thus suggested that the specific nature of the three characterizing elements of a local community is a product of its specific socio-cultural context. In any given case, a local community needs to be analyzed in its specific socio-cultural context in order to discover the specific nature of each of the three elements.

In an attempt to integrate the sociological and psychological approaches to the study of the local community and to promote the context-sensitive operationalization and measurement of sense of community, the framework also proposes explicit conceptual linkages between the construct of psychological sense of community as defined in the community psychology literature and the specific characteristics of the referent local community with which it is associated. It is suggested that

a sense of community is directly influenced by: (1) members' perceptions about the extent or degree to which relevant needs and interests are shared and to which there is agreement about the appropriate behavioral mechanisms through which these needs and interests ought to be fulfilled or pursued – or perceived community homogeneity, (2) members' perceptions about the actual occurrence of these behavioral mechanisms – or perceived community functioning, and (3) members' perceptions about the actual fulfillment or satisfaction of shared needs and interests – or perceived community competence.

The framework identifies then a first mechanism through which environmental design may impact sense of community: the "instrumental role" of the built environment. This instrumental role refers to the capacity of the built environment to enable or facilitate the occurrence of culturally appropriate or desired patterns of behavior. Through this instrumental role, manipulations of characteristics of the built environment may then facilitate the occurrence of community behavioral mechanisms through which needs and interests shared by members are to be fulfilled and thus, may positively impact actual local community functioning and, consequently, actual local community competence. In turn, increased community functioning and community competence will probably reinforce perceived community functioning and perceived community competence and thus may help enhance the psychological sense of community.

Finally, the framework proposes a second mechanism through which environmental design may impact sense of community: the "symbolic role" of the built environment. This symbolic role refers to the capacity of the built environment

to affect perceptions about one's social environment and about the cultural and social characteristics of the individuals and groups of which it is composed. It is suggested that, through the symbolic role, manipulations of characteristics of the built environment, without necessarily a direct impact on behavior or on the occurrence of community behavioral mechanisms, may reinforce perceived community homogeneity, perceived community functioning, and perceived community competence and thus may help enhance the psychological sense of community. And, as supported by some research, an increased level of sense of community may, in turn, act as a catalyst for actual community functioning (see Chavis & Wandersman, 1990; Perkins et al., 1996).

As discussed by Rapoport (1985, p.256), theoretical frameworks are somewhat "arbitrary" in the sense that, for a particular subject or phenomenon, many frameworks could be formulated and that alternative frameworks may prove useful for different purposes. Yet, they are not completely arbitrary. Theoretical frameworks need to fit and unify existing evidence and superior or more useful frameworks will fit evidence better than others and will integrate more evidence than others. Thus, the following sections present an analysis of the relevant literature that was conducted to investigate the extent to which the proposed framework fits existing research evidence and integrates relevant theoretical and disciplinary perspectives as well as to provide support for its conceptual validity – that is the validity of the conceptualizations it relies on and of the conceptual linkages it proposes. This analysis is presented in four sections each addressing one of the main components of the proposed framework.

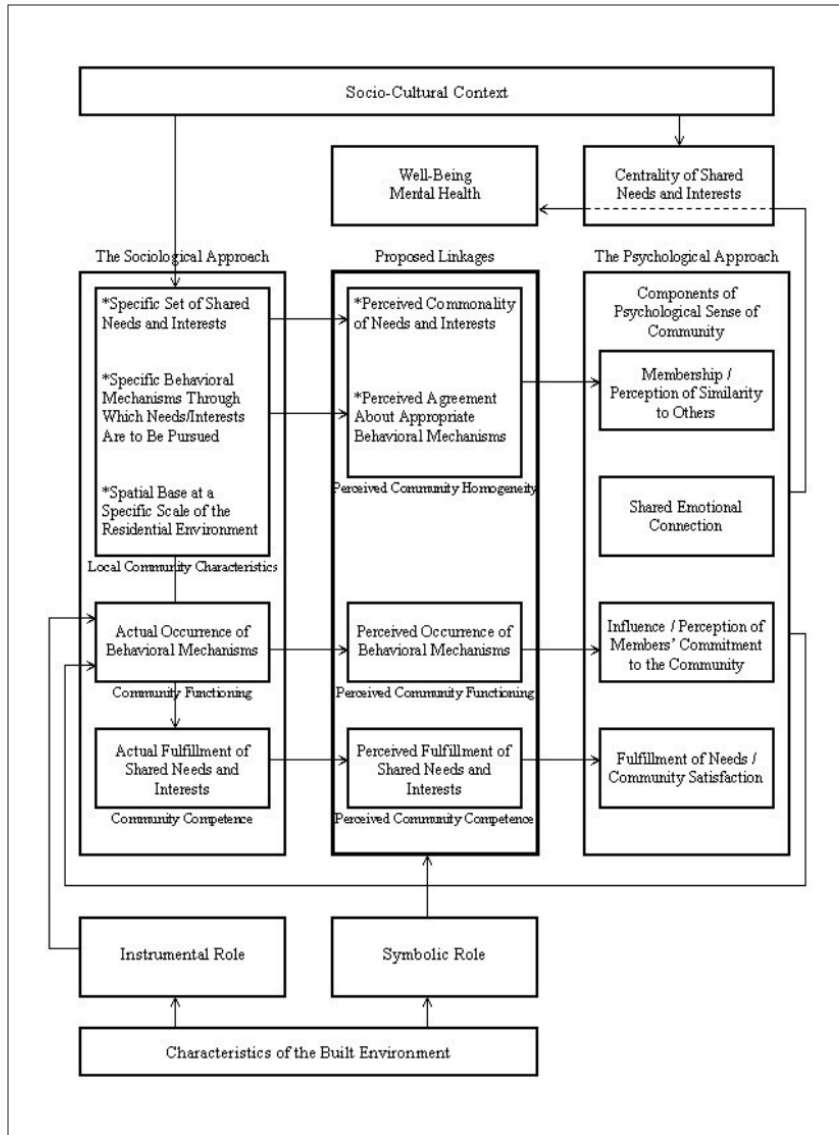


Figure 1: An Integrative and Cross-Culturally Valid Theoretical Framework (Source: Author).

The Proposed Conceptualization of Local Community

Local community is broadly conceptualized here as a residentially based unit of social organization or social group in which members – individuals or households – are united by the desire to fulfill or pursue shared needs and interests through specific behavioral mechanisms that they, in common, consider appropriate. Thus, in any given case, a local community manifests itself at a particular scale of the residential environment through the functioning of particular appropriate behavioral mechanisms through which specific needs and interests shared by members are to be fulfilled or pursued. Accordingly, a particular local community is characterized by three major elements: (1) a specific set of needs, wants, and interests shared by members; (2) specific appropriate or desired behavioral mechanisms through which these needs and interests are or ought to be fulfilled or realized; and (3) a spatial or geographical base at a scale or another of the residential environment.

Many formulations and definitions in the literature emphasize, more or less explicitly, these same three elements (e.g. Warren, 1978; Guterbock, 1990). Furthermore, the broad conceptualization proposed here appears to be compatible with a number of major theoretical sociological approaches to the study of the local community such as the functional approach (Warren, 1978), the interactional approach (Wilkinson, 1972), and the political economy approach (Bartelt et al., 1987). It is also compatible with various typologies of local communities such as those developed by Warren (1979) and Brint (2001).

The nature of the shared needs and interests that

may characterize a local community has been addressed in a number of different ways in the literature. It has been addressed for example in terms of the potential functions of the local community (Warren, 1978; Hunter, 1979), in terms of dimensions of community satisfaction (Guest & Lee, 1983; White, 1985; Hummon, 1992), or in relation to basic human needs (Walmsley, 1988). This literature shows that these needs and interests may be physiological, psychological, social, and/or economic in nature; they may range from needs related to matters of subsistence to a desire for improved recreational facilities, from the need for security to an interest in the protection of property values. The literature also confirms that the specific nature of these needs and interests tends to differ from one socio-cultural context to another (Chaskin, 1997; Rapoport, 1997b). Similarly, the literature shows that the specific nature of the community characteristic behavioral mechanisms through which shared needs and interests are pursued at local levels of the residential environment covers a wide range of possibilities and tends to vary across socio-cultural contexts. For example, these mechanisms can be more formal or more informal in character (Warren, 1978; Greenberg & Rohe, 1986). They can take the form of collective action or the form of an aggregate of individual behaviors. They may rely on the involvement of any, most, or all of the community members or can be characterized by a more or less clear specialization of roles.

It is clear that the conceptualization of local community proposed here assumes or implies a certain cultural or subcultural homogeneity among members. In fact, Rapoport (1997b) actually explains the continued social importance of the local area or the

neighborhood by the continued tendency – or even increased tendency in today’s culturally diverse urban environment – of people to geographically cluster in groups of subjective homogeneity. However, the proposed conceptualization acknowledges that two or more local communities may coexist in or share a same local area or spatial base. In such cases, each of the local communities will be defined by specific subjective criteria of homogeneity and will be characterized by a different set of needs and interests shared by its members and/or different behavioral mechanisms through which these needs and interests are to be fulfilled or pursued (e.g. Merry, 1981; Crenshaw and St. John, 1989; Frankfort-Nachmias & Palen, 1993; Hutchinson et al., 1996).

According to the proposed conceptualization, local communities do not necessarily conform to what is termed the “institutionally complete community”: a socio-spatial entity within which all or most of one’s basic needs are met and primary relationships are maintained. In other words, the needs and interests shared by members of a community and expected to be fulfilled at a local scale of the residential environment do not necessarily include needs and interests related to all aspects of life. Depending on the socio-cultural context, the satisfaction of some of these needs and interests may occur outside of the realm of the local community (O’Brien et al., 1989; Rapoport, 1997b).

The proposed conceptualization of local community also acknowledges that residents of a local area may simultaneously associate with or be members of what the literature often refers to as a number of “nesting” local

communities. In particular socio-cultural contexts, some needs and interests are shared and are satisfied or pursued at a certain scale of the residential environment while other needs and interests are shared and met at a larger scale or at increasingly larger scales of the residential environment. Functioning local communities can be then identified at each of these scales and form hierarchies of nesting local communities (Suttles, 1972; Hunter, 1974; Kearns & Parkinson, 2001).

Linking Sense of Community to Community Characteristics

The proposed conceptual linkages between sense of community and the context-specific characteristics of the referent local community with which it is associated are suggested to correspond or contribute to the components of the construct of psychological sense of community identified in the community psychology literature, particularly those identified by McMillan & Chavis (1986) whose theoretical development of the concept is widely accepted as the most comprehensive to date (Hill, 1996).

“Perceived commonality of needs and interests” refers to the extent to which a member of a local community perceives that other community members share the needs and interests he or she expects to be fulfilled or pursued through local community functioning. “Perceived agreement about appropriate behavioral mechanisms” refers to the extent to which a member of a local community perceives that other community members agree with what he or she sees are the appropriate behavioral mechanisms through which these needs

and interests ought to be fulfilled or pursued. The proposed conceptualization of local community identifies the sharing of a particular set of needs and interests with other residents of a local area and agreement with them about the particular behavioral mechanisms through which these needs and interests ought to be fulfilled or pursued as the major criteria of local community membership. Accordingly, it is suggested that perceived commonality of needs and interests among residents of a local area and perceived agreement among them about the appropriate behavioral mechanisms to adopt correspond or contribute to the feeling of "membership" that McMillan and Chavis (1986, p. 9) identify as one of the elements of sense of community. Further, it is suggested that perceived commonality of needs and interests and perceived agreement about appropriate community behavioral mechanisms contribute to the "perception of similarity to others" that Sarason (1974, p. 157) and Glynn (1981, 1986) emphasize as an important component of psychological sense of community.

"Perceived community functioning" refers to the extent to which a member of a local community perceives that the appropriate behavioral mechanisms through which needs and interests shared by community members are to be pursued are actually occurring. It is suggested that perceived community functioning influences a member's perception of other members' commitment to the local community – that is their commitment to shared values and norms and their willingness to participate in the pursuit of shared needs and interests. According to Sarason (1974), McMillan and Chavis (1986), and Wilson and Baldassare (1996), such perception of members' commitment to the

community is important to the development of a sense of community. It is also suggested that perceived community functioning contributes to the "influence" component of psychological sense of community (McMillan & Chavis, 1986, p. 11) as it may impact the perception of the community's ability to influence the behavior of its members and the perception of one's capacity, as a member, to influence the functioning and competence of the community.

"Perceived community competence" refers to the extent to which a member of a local community perceives that needs and interests shared by community members and expected to be fulfilled or pursued through community functioning are actually being satisfied. Perceived community competence corresponds to the "fulfillment of needs" component of sense of community identified by McMillan and Chavis (1986, p. 12). In addition, community satisfaction, and community attachment, which Glynn (1981; 1986) identify as predictors of actual level of sense of community, are strongly related to the perceived fulfillment of shared needs and interests through local community functioning (see Fried, 1982; Guest & Lee, 1983; White, 1985; Chavis & Wandersman, 1990; Hummon, 1992). It is also suggested that, together, all of the proposed linkages contribute to the "shared emotional connection" component of sense of community identified by McMillan and Chavis (1986, p. 13) and contribute to and reinforce the feeling of interdependence among members of a local community and the feeling of being part of a dependable and stable structure or group which Sarason (1974, p. 157) includes in his definition of sense of community.

The Instrumental Role of the Built Environment

The instrumental role of the built environment refers to the capacity of physical characteristics of the environment to enable or promote the occurrence of behavior. It should be emphasized that the built environment does not cause or elicit behavior. It can, however, depending on its physical attributes, inhibit or enable and facilitate the occurrence of a variety of behaviors. But the built environment will only promote the occurrence of those behaviors that are considered appropriate or desired by the people involved (Rapoport, 1986, p. 166). Culture has been particularly emphasized as a major determinant of the general desirability of a particular behavior and its appropriateness in a particular setting. What people consider to be appropriate or desired behaviors in a particular setting is a function and a direct expression of their culture or more specifically of their culturally or subculturally determined values, norms, and lifestyle (Rapoport, 1990a; 2001).

The literature offers two major theoretical approaches to the instrumental role of the built environment. Each of the approaches sheds some light on the capacity of the physical environment to enable and promote the occurrence of appropriate or desired behavior by emphasizing different conceptualizations of the built environment. The two approaches are not mutually exclusive and should be seen as complementary rather than competing.

The first approach relies on a conceptualization of the built environment that emphasizes the capacity of its physical characteristics to afford opportunities for human behavior. The built environment is primarily viewed as a tool,

instrument, or prop for behavior and as providing the physical context of behavior. As such, and according to its physical characteristics (including for example spatial configuration, types of enclosure, properties of materials used for fabrication and surface finishing, nature and arrangement of furniture, electric and electronic equipment, and other semi-fixed features present, illumination, air and surface temperatures, air velocity, air quality, and so on), a particular outdoor or indoor setting presents opportunities for some behaviors to take place and constraints that may hinder or prevent the occurrence of others.

The concept of "affordances" of the built environment (Gibson, 1977), particularly as adapted by Lang (1987) and further developed by Shehayeb (1995) who uses the term "functional opportunity," is an example of theoretical formulation of this approach (see also Greeno, 1994; Zaff, 1995). Affordances of a physical setting or the potential functional opportunities for behavior that it offers are a property of its physical characteristics. However, the perception and use of these affordances or functional opportunities are to a great extent a function of the biological nature of people and of worldviews, values, norms, lifestyle, and previous experiences that are dependent on the socialization that a person goes through as part of a particular culture or subculture (Lang, 1987; Shehayeb, 1995). Utilized functional opportunities will tend to be those of the potential functional opportunities offered by a given physical setting that correspond to what is considered by users culturally appropriate or desired behavior in that particular setting.

Often implicitly rather than explicitly, most of the research on the potential impact of design on social behavior in general (see reviews in Lang, 1987; Ahrentzen, 2001) and on social behavior in the residential environment (see reviews in Michelson, 1976; Cooper-Marcus & Sarkissian, 1986; Cooper-Marcus, et al., 1998; Talen, 2000) has been based on such a conceptualization of the built environment and has thus adopted this approach to the instrumental role.

The second approach relies on a conceptualization of the built environment that emphasizes its capacity to communicate meanings. According to Rapoport (1990b), meaning is one of the central mechanisms linking people with their built environment. First, the communication of meanings provides much of the rationale for the ways it is shaped, transformed, and personalized. Second, a person's cognitive, affective, and behavioral responses to a particular environment are greatly shaped by the meanings they extract from it and associate with it (Genereux, Ward, & Russell, 1983; Nasar, 1989; Hanyu, 1993). However, this approach has been somewhat neglected in the study of the impact of environmental design on behavior and has thus, to date, generated much less research than the first one.


Rapoport (1988; 1990b) suggests that built environments may communicate conceptually distinct types or levels of meanings including "low-level meanings" that are "everyday and instrumental meanings: mnemonic cues for identifying uses for which settings are intended and hence the social situations, expected behavior, and the like; privacy, accessibility; penetration gradients; seating arrangements; movement and way-finding; and other

information which enables users to behave and act appropriately and predictably, making co-action possible" (Rapoport, 1990b, p. 221). It is through the communication of these "low-level" instrumental meanings that the built environment may more directly enable, facilitate, and promote the occurrence of what is considered appropriate or desired behavior.

It is clear that this approach, as presented by Rapoport (1990b), also emphasizes the importance of culture in the relationship between the built environment and behavior. First, what is considered appropriate or desired behavior in a particular setting is culturally specific. Second, the correspondence between these appropriate or desired behaviors and the particular instrumental meanings that need to be communicated through the built environment to elicit them is also culturally specific. Further, to be effectively communicated, these meanings have to be coded through manipulations of aspects of the built environment in the form of physical cues that targeted users have learned to look for, read, decode, and appropriately understand through a cultural socialization process. In addition, in order to effectively contribute to the instrumental role of the built environment, these cues need to be displayed with enough clarity and redundancy to be noticed, detected, and appropriately understood and should not convey conflicting messages. The required level of cue redundancy in any particular situation is also culturally specific.

The Symbolic Role of the Built Environment

The symbolic role of the built environment refers to the capacity of physical characteristics of



the environment to affect perceptions about the social environment and about the cultural and social characteristics of the individuals and groups of which it is composed. It operates through the capacity of physical aspects of the environment to express and communicate meanings – primarily middle-level meanings and, possibly, high-level meanings rather than instrumental meanings (Rapoport, 1990b).

Evidence for the direct impact that the built environment may produce on perceived local community homogeneity is provided by research that has investigated the expression and communication of identity through physical aspects of the residential environment. Indeed, this research demonstrates that people can use cues incorporated in the physical appearance of dwellings to make inferences about their occupants' group affiliations, including affiliation to or membership in residentially based social groups, and about their cultural and social characteristics such as worldviews, values, lifestyle, social and economic status, education level, and sociability. Studies also show that the inference of such information can be made with relatively high levels of agreement and validity (Duncan et al., 1985; Sadalla et al., 1987; Sadalla & Sheets, 1993). It is evident that such inferences about the identity of neighbors can have a strong impact on one's perception of the homogeneity of his or her local area and on one's perceptions about the extent and degree to which needs and interests expected to be fulfilled through local community functioning are shared with other residents and about the extent to which there is agreement with other residents about the appropriate or desired behavioral mechanisms through which these needs and interests ought to be pursued.

According to the proposed framework, these perceptions can contribute to the enhancement of a sense of community among the residents of a local area, which, in turn, can impact actual community functioning. In fact, a number of studies associate the expression of identity through the personalization of dwelling exteriors with increased neighborhood social cohesiveness and increased social interaction among neighbors and other manifestations of local community functioning (Becker & Coniglio, 1975; Greenbaum & Greenbaum, 1981; Brown & Werner, 1985; Werner et al., 1989).

Research appears to confirm that, as argued by Rapoport (1990b), semifixed elements such as furniture, curtains, awnings, lights, signs, plantings, and flowers and their arrangements generally play a more important role than fixed elements in the expression of identity through the physical appearance of dwellings (e.g. Greenbaum and Greenbaum, 1981; Pratt, 1982; Janz, 1992). However, some studies have demonstrated that fixed-feature elements of dwellings can also be important in the communication of aspects of identity (e.g. Cherulnik & Wilderman, 1986; Nasar, 1989; Hull, 1992; Sadalla & Sheets, 1993; Stedman, 2002). Fixed-feature elements emphasized in these studies include for example size of lot and/or dwelling, building materials, architectural style, and internal organization.

The research literature also provides evidence for the potential impact of the built environment, through its symbolic role, on perceptions of residents of a local area about the actual occurrence of behavioral mechanisms of community functioning – or perceived community functioning – and about the actual fulfillment of needs and interests – or perceived

community competence. For example, research suggests that people can use physical cues in the residential environment to make judgments about the commitment of residents of their local area to actively contribute to the maintenance of social order and, in particular, to monitor the neighborhood and confront or otherwise react against suspected criminal behavior and suspicious presence on their block or in their neighbors' properties (Brown & Altman, 1983; Perkins et al., 1992; Brown & Bentley, 1993; Shaw & Gifford, 1994; Harris & Brown, 1996). These physical cues – referred to as symbolic barriers (Newman, 1972) or territorial markers (Brown & Altman, 1983) and often consisting of signs of upkeep, beautification, and personalization such as the planting of gardens, hedges, trees, and shrubs, the use of low fences, and the display of decorations and name signs – can contribute to the instrumental role of the built environment by defining the boundaries and indicating ownership of specific settings or territories, by communicating who is or is not welcomed and what behaviors are or are not accepted in them, and thus by facilitating appropriate behavior and promoting effective territorial functioning as a behavioral mechanism for the regulation of social interaction and the maintenance of social order (Brown, 1987; Taylor, 1988). But, at the same time, they can also contribute to the symbolic role of the built environment by directly impacting perceptions about the vigilance and the territorial commitment of residents and thus perceived local community functioning.

Studies of fear of crime in the residential environment provide another example of the symbolic role of the built environment. It is an interesting example because it suggests that the presence of certain physical cues can have a

negative impact on perceived local community functioning and competence. Research shows that fear of crime is more closely related to subjective perceptions of “community disorder” – that is negative subjective perceptions of community functioning and community competence – than to objective assessments of the effectiveness of community mechanisms for the defense against crime (see Perkins & Taylor, 1996). And, increased fear of crime among residents of a street block or of a neighborhood has been linked to the presence of physical incivilities or such physical cues as litter, graffiti, vandalism, dilapidated housing, abandoned cars, and unkempt lots (Taylor et al., 1985; Perkins et al., 1990; Covington & Taylor, 1991; Perkins et al., 1992; Perkins & Taylor, 1996). Studies have also shown that the presence of other physical cues can reduce levels of neighborhood fear of crime. For example, the presence of trees and other forms of vegetation has been suggested to reduce levels of fear of crime and promote a sense of safety and a sense of community in inner-city neighborhoods (Coley et al., 1997; Kuo et al., 1998).

Research in other areas of investigation can be used to suggest additional applications of the symbolic role of the built environment. For example, studies and analyses suggest that the physical features – including, among others, size, height, scale, building materials, ornateness, architectural style, color, interior organization and decor, landscaping, and siting, – of such buildings as government buildings (Goodsell, 1993), courthouses (Greenberg, 1987; Maas et al., 2000), school buildings (Pasalar, 2001), and other public and civic buildings (see Goodsell, 1988; Rapoport, 1990b) can communicate the nature, importance, functions, and policies of

the institutions that they house as well as the worldviews and values on which the functioning of these institutions is based. It is reasonable to hypothesize then that, in local communities that rely on the operation of such institutions as mechanisms of community functioning, the architecture and the visibility – through form and/or location – of public and civic buildings can contribute to the symbolic role of the built environment and influence members' perceptions about community functioning and community competence.

Finally, the importance of the physical clarity of the boundaries of neighborhoods emphasized in many definitions and discussions of the neighborhood as a socio-spatial entity or as a type of local community (Chaskin, 1997; Rapoport, 1997b) can be discussed in terms of the potential contribution of such clarity to the instrumental and symbolic roles of the built environment. The physical clarity of the boundaries of the geographical area associated with a local community – an area of subjective homogeneity that may be limited by the nature and requirements of the behavioral mechanisms adopted for the satisfaction of shared needs and interests – can be achieved through the presence of prominent natural or man-made physical boundaries and/or through a distinct physical character clearly distinguishing the area from its surroundings. In local communities that rely on behavioral mechanisms of community functioning that are enabled or directly facilitated by the physical clarity of area boundaries, this clarity will contribute to the instrumental role of the built environment. On the other hand, in other local communities, the clarity (or lack of clarity) of physical boundaries may not have any

direct impact on mechanisms of community functioning and, thus, may not contribute to the instrumental role of the built environment, but may play an important symbolic role. Indeed, the physical clarity of the boundaries of the area associated with a local community and greater agreement among members about these boundaries has been suggested to reinforce identification with the area and the community, feelings of attachment, and a sense of group affiliation or membership (see reviews in Chaskin, 1997; Rapoport, 1997b). According to Blakely and Snyder (1998), the walls and gates of gated communities in the United States promote a sense of security – even if not really effective in reducing the incidence of crime – as well as a perception of homogeneity among residents and a uniting feeling of “us versus the outside world” and may thus help enhance a sense of community.

Conclusion

The analysis of the relevant literature presented above appears to show that the proposed framework satisfactorily fits a large amount of existing research evidence, to demonstrate its capacity to integrate the major theoretical and disciplinary perspectives, and to illustrate its capacity to unify and organize the vast literature related to the study of the relationship between the built environment and neighborhood sense of community.

In addition, the analysis of the literature seems to provide support for the conceptual validity of the framework. In particular, it provides support for the proposed conceptualization of local community, for the proposed conceptual linkages between the construct of psychological

sense of community and the socio-cultural characteristics of the referent local community, and for the instrumental and symbolic roles of the built environment as two mechanisms through which environmental design may impact sense of community.

Several suggestions for future research can be formulated. Of course, there is a need for research to empirically test and potentially improve the framework. For example, research may investigate the extent to which the proposed conceptualization of local community is useful in assessing and describing the nature of social organization in the residential environment in different socio-cultural contexts and the extent to which it can help identify similarities and differences across contexts. Research may also further investigate the validity of the proposed linkages between psychological sense of community and the socio-cultural characteristics of the referent local community, or the extent to which they can help predict sense of community and other related concepts such as satisfaction, attachment, and well-being. The framework promotes a context-specific operationalization of psychological sense of community and there is thus a need for the development of context-sensitive instruments for the measurement of the construct. In addition, there is a need for a more systematic investigation of the nature of the instrumental and symbolic roles of the built environment as articulated here and of the extent of their potential impacts on neighborhood sense of community, in general as well as in specific socio-cultural contexts.

The framework presented in this paper does not explicitly address the role that environmental design may play in the constructive integration

of the local community in the larger society. This is certainly an interesting and worthy direction in which the framework could be expanded.

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