Defining place attachment: A tripartite organizing framework

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ABSTRACT

Place attachment has been researched quite broadly, and so has been defined in a variety of ways. The various definitions of the concept are reviewed and synthesized into a three-dimensional, person–process–place organizing framework. The person dimension of place attachment refers to its individually or collectively determined meanings. The psychological dimension includes the affective, cognitive, and behavioral components of attachment. The place dimension emphasizes the place characteristics of attachment, including spatial level, specificity, and the prominence of social or physical elements. In addition, potential functions of place attachment are reviewed. The framework organizes related place attachment concepts and thus clarifies the term. The framework may also be used to stimulate new research, investigate multidimensionality, create operational definitions for quantitative studies, guide semi-structured interviews for qualitative studies, and assist in conflict resolution for successful land-use management.

Place attachment, the bonding that occurs between individuals and their meaningful environments, has gained much scientific attention in recent years (e.g., Giuliani, 2003; Low & Altman, 1992). Part of this interest stems from the awareness that person–place bonds have become fragile as globalization, increased mobility, and encroaching environmental problems threaten the existence of, and our connections to, places important to us (Relph, 1976; Sanders, Bowie, & Bowie, 2003; Sennett, 2000).

Place attachment is also worthy of study because of its relevance to many important processes. For instance, the examination of place attachment as an emotional bond has shed light on the distress and grief expressed by those who are forced to relocate (e.g., Fried, 1963; Fullilove, 1996). Place attachment has thus been applied to disaster psychology (e.g., Brown & Perkins, 1992), immigration (e.g., Ng, 1998), and mobility (e.g., Giuliani, Ferrara, & Barabotti, 2003; Gustafson, 2001). Other research has shown that place meaning and attachment can be used to plan and encourage the use of public spaces, such as national parks (e.g., Kyle, Graefe, & Manning, 2005; Moore & Graefe, 1994; Williams & Stewart, 1998). Place attachment is also relevant to the study of environmental perception. Attached individuals experience a heightened sense of safety, even when their place is situated in a war zone (e.g., Billig, 2006). On a smaller scale, attachment to one's neighborhood is associated with fewer perceived incivilities (e.g., drug dealing, gang activity, traffic, etc.) on one's block and less fear of neighborhood crime (Brown, Perkins, & Brown, 2003). Finally, because of its associations with environmental risk perception, and place-protective attitudes (e.g., Kyle, Graefe, Manning, & Bacon, 2004; Nordenstam, 1994; Stedman, 2002; Vorkinn & Riese, 2001), place attachment contributes to the understanding of pro-environmental behavior, although the research on this topic is limited and the findings are inconsistent (e.g., Uzzell, Pol, & Badenas, 2002; Vaske & Kobrin, 2001).

Because of the application of place attachment to many perspectives, a plenitude of definitions has accumulated. For the most part, researchers portray place attachment as a multifaceted concept that characterizes the bonding between individuals and their important places (e.g., Giuliani, 2003; Low & Altman, 1992). However, variations in this definition are vast. Humanistic geographers argue that a bond with a meaningful space, or "sense of place" is a universal affective tie that fulfills fundamental human needs (e.g., Relph, 1976; Tuan, 1974). Some authors suggest that sense of place encompasses the sub-concepts of place identity, place attachment, and place dependence (e.g., Jorgensen & Stedman, 2001), or that it includes ancestral ties, feeling like an "insider," and a desire to stay in the place (Hay, 1998). In the immigration and refugee literature, however, the emphasis is typically on displacement, or "diaspora," such that attachment is defined by the intensity of longing for places that are lost (Deutsch, 2005). Urban sociologists and community scientists locate attachment at the city, home, and neighborhood levels (e.g., Kasarda & Janowitz, 1974). Even within disciplines, models diverge in their

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definitions of place attachment; for example, place attachment has been said to rely on social features (e.g., Woldoff, 2002), physical features (e.g., Stokols & Shumaker, 1981), or both (e.g., Riger & Lavrakas, 1981).

This definitional diversity reflects the growing interest in place attachment, and can be seen as progress in the concept's theoretical development. Researchers have highlighted different processes, places, and people involved in person–place bonding, but these definitions remain scattered in the literature, and thus the theoretical development of the concept has not yet been acknowledged, nor has a more general definition of place attachment been agreed upon. By exploring the commonalities across the different permutations of the concept, we can begin to shape, then structure, a coherent understanding of it.

1. Understanding place attachment: a tripartite organizing framework

We propose a three-dimensional framework of place attachment that usefully structures the varied definitions in the literature. This framework proposes that place attachment is a multidimensional concept with person, psychological process, and place dimensions (see Fig. 1). The first dimension is the actor: *who* is attached? To what extent is the attachment based on individually and collectively held meanings? The second dimension is the psychological process: *how* are affect, cognition, and behavior manifested in the attachment? The third dimension is the object of the attachment, including place characteristics: what is the attachment *to*, and what is the nature of, this place? This three-dimensional framework of place attachment organizes the main definitions in the literature and, as knowledge grows about the specific levels within each of these dimensions, a comprehensive understanding of place attachment will be reached.

2. The person dimension: individual and collective place attachment

Place attachment occurs at both the individual and group levels, and although definitions of the term tend to emphasize one over the other, the two may overlap. At the individual level, it involves the personal connections one has to a place. For example, place attachment is stronger for settings that evoke personal memories, and this type of place attachment is thought to contribute to a stable sense of self (Twigger-Ross & Uzzell, 1996). Similarly, places become meaningful from personally important experiences, such as realizations, milestones (e.g., where I first met my significant other), and experiences of personal growth, as Manzo (2005) notes in her study of the experiences and places that create place meaning. She comments, "it is not simply the places themselves that are significant, but rather what can be called 'experience-in-place' that creates meaning" (p. 74). Although other theorists argue that place characteristics are integral in the construction of place meaning, the argument that individual experiences may form the basis for the attachment is convincing.

At the group level, attachment is comprised of the symbolic meanings of a place that are shared among members (Low, 1992). Group-framed place attachment has been examined in different cultures, genders, and religions. For example, attachment has been described as a community process in which groups become attached to areas wherein they may practice, and thus preserve, their cultures (e.g., Fried, 1963; Gans, 1962; Michelson, 1976). Culture links members to place through shared historical experiences, values, and symbols. In a study of landscape perception, forests were perceived to be more threatening for Hispanic Americans, African Americans, and women, and less threatening for European Americans and men (Virden & Walker, 1999). The authors speculate that different meanings arise from historical events, religion, and other experiences common to group members, and that these meanings are transmitted to subsequent generations.

In addition, place attachment may be religiously based. Through religion, the meanings of certain places become elevated to the status of sacred (Mazumdar & Mazumdar, 2004). Revered places such as Mecca or Jerusalem or, on a smaller scale, churches, temples, shrines, burial sites, or divine places in nature, are central to many religions, and their scared meanings are shared among worshippers. Not only do such places seem to bring worshippers closer to their gods, but reverence for, and protection of, these places essentially reflects one's cultural fealty. Although religions
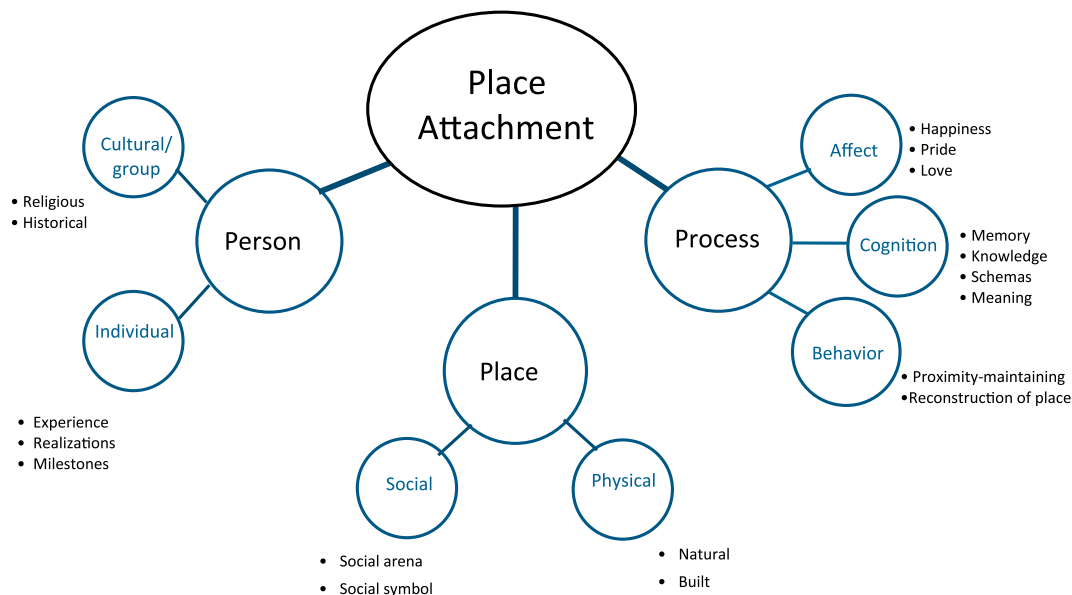

Fig. 1. The tripartite model of place attachment.

often designate which places are important, Mazumdar and Mazumdar note that religious connections to place can also be individual: a place may gain spiritual significance through personal experiences (e.g., an epiphany). Therefore, the cultural and individual levels of place attachment are not entirely independent. Cultural place meanings and values influence the extent of individual place attachment, and individual experiences within a place, if positive, can maintain and possibly strengthen cultural place attachment.

3. The psychological process dimension of place attachment

The second dimension of place attachment concerns the way that individuals and groups relate to a place, and the nature of the psychological interactions that occur in the environments that are important to them. The three psychological aspects of place attachment or, according to some authors, sense of place, (e.g., Jorgensen & Stedman, 2001) typically highlighted in its various theoretical and operational definitions are affect, cognition, and behavior. Some definitions include all three of these components, and others emphasize only one or two of them. This organization of place attachment is common to other social psychological concepts such as attitudes and prejudice, which are also characterized by affective, cognitive, and behavioral components (e.g., Aronson, Wilson, Akert, & Fehr, 2005).

3.1. Place attachment as affect

Person–place bonding undoubtedly involves an emotional connection to a particular place (e.g., Cuba & Hummon, 1993; Fullilove, 1996; Giuliani, 2003; Hidalgo & Hernández, 2001; Manzo, 2003, 2005; Mesch & Manor, 1998; Riley, 1992). Humanistic geographers describe place belongingness in emotional terms. Tuan (1974), for example, coined the word "topophilia" or "love of place," for this connection, and Relph (1976) defined place attachment as the authentic and emotional bond with an environment that satisfies a fundamental human need. Environmental psychologists similarly assert the central role of affect in person–place bonding. Most often, their definitions portray place attachment in affective terms, such as an emotional investment in a place (Hummon, 1992), or "feelings of pride …and a general sense of well-being" (Brown et al., 2003).

Further evidence that attachment to a place is grounded in emotion comes from the literature on displacement, when individuals must leave their places such as in the event of a natural disaster or war, immigration, or relocation. In his classic study on the effects of displacement, Fried (1963) investigated a neighborhood redevelopment project in the West End of Boston. The "improvements" planned for the neighborhood caused the residents to lose familiar structures and social settings, and many of them were forced to move. Essentially, this reconstruction meant the collapse of a tight-knit community. After the fact, residents mourned and displayed symptoms of grief. Fried concluded that grief is not limited to the death of a loved one, but can emerge following the loss of an important place. Fullilove (1996) also found that displacement results in feelings of sadness and longing, and so concluded that attachment is primarily based in affect.

Relationships with place can represent an array of emotions from love and contentment to fear, hatred, and ambivalence (Manzo, 2005). For example, one can experience a childhood home as a significant place, but that does not necessarily mean the bond is positive. Rather, unhappy or traumatic experiences in a place may create negative feelings or even aversion toward it. Although strong negatively valenced bonds can form with important places, attachment usually is defined in positive terms; the desire to maintain closeness to a place is an attempt to experience the positive emotions that a place may evoke (Giuliani, 2003).

3.2. Place attachment as cognition

Person–place bonds also include cognitive elements. The memories, beliefs, meaning, and knowledge that individuals associate with their central settings make them personally important. Place attachment as cognition involves the construction of, and bonding to, place meaning, as well as the cognitions that facilitate closeness to a place. Through memory, people create place meaning and connect it to the self. As noted earlier, one can grow attached to the settings where memorable eras or important events occurred (Hay, 1998; Hunter, 1974; Manzo, 2005; Rubenstein & Parmelee, 1992; Twigger-Ross & Uzzell, 1996). Hunter (1974) describes these as "symbolic communities," because the attachment is based on the representations of the past that the setting contains.

Individuals structure social information so that it is maximally coherent and easy to process (Sears, Freedman, & Peplau, 1985). This information is organized into sets of cognitions, or schemas (Bartlett, 1932), which include knowledge and beliefs about particular objects, or the self (Markus, 1977). Schemas may be applied to place attachment. For example, Fullilove (1996) views familiarity as the cognitive component of place attachment; to be attached is to know and organize the details of the environment. Feldman's (1990) notion of settlement identity suggests that individuals are attached to certain types or categories of places (e.g., cottages in rural settings, suburban single-family dwellings, or downtowns). Stokols and Shumaker (1981) describe a similar concept, "generic place dependence" (p. 481). For these attachments, the schema contains information about the features common to the types of places to which one may become attached. A favorite place may be a kind of place schema of place-related knowledge and beliefs, which ultimately represents the special character of the place and one's personal connections to it. In turn, these cognitions can become incorporated into one's self-concept.

Proshansky and colleagues (e.g., Proshansky, 1978; Proshansky & Fabian, 1987; Proshansky, Ittelson, & Rivlin, 1970; Proshansky, Fabian, & Kaminoff, 1983) coined the term place identity, to describe the "physical world socialization of the self" (Proshansky et al., 1983. p. 57), or the self-definitions that are derived from places. This occurs when individuals draw similarities between self and place, and incorporate cognitions about the physical environment (memories, thoughts, values, preferences, categorizations) into their self-definitions. Salient features of a place that make it unique (e.g., architecture, historical monuments, a cultural community) can be attached to one's self-concept, a process that Twigger-Ross and Uzzell (1996) call "place-related distinctiveness."

This process is comparable to the development of social identity as described by optimal distinctiveness theory (Brewer, 1991), which asserts that social identity forms when a person seeks a balance of similarity to in-group members, and distinctiveness from out-groups. Place also provides information about one's distinctiveness or similarity, information that may be based on physical or social features. Similarity would represent a sense of belonging to a place, and could be attained in a neighborhood, for example, from comparisons of the physical appearance of one's house to the houses of proximal others. Differentiation in place identity would depend on distinguishing features such as climate or landscape and their relevant connotations (e.g., "we are 'island people'"). In general, individuals may connect to a place in the sense that it comes to represent who they are. Connections to place may be cognitive, and can sometimes be incorporated, at the most personal level, into one's self-definition.

3.3. Place attachment as behavior

The third aspect of the psychological process dimension of place attachment is the behavioral level, in which attachment is expressed through actions. Like interpersonal attachment, place attachment is typified by proximity-maintaining behaviors and is "a positive, affective bond between an individual and a specific place, the main characteristic of which is to maintain closeness to such a place" (Hidalgo & Hernández, 2001, p. 274). The idea of place attachment as proximity-maintaining behavior is supported in studies that relate place attachment to length of residence (Hay, 1998; Kasarda & Janowitz, 1974) and efforts to return. The literature on homesickness shows that some individuals who have been absent from their homes for an extended period of time express a great desire to return to or visit the place, and at times, the return can involve much effort or cost (e.g., Riemer, 2004). A religious pilgrimage is another behavior that exemplifies efforts made to be close to one's significant place (Low, 1992; Mazumdar & Mazumdar, 2004).

Nevertheless, maintaining proximity to one's place is not constantly enacted by the securely attached individual; one may be highly attached to a place, and yet depart from it regularly. In fact, place attachment can even become dysfunctional when an individual with a rigid bond to home is reluctant to leave it (Fried, 2000). For example, these individuals may miss important opportunities, or even put themselves in mortal danger for the sake of remaining in the place. Furthermore, the dialectical process of being at home versus being away from home aids in the development of place meaning (Case, 1996; Dovey, 1985). Through journeys away, in combination with proximity-maintaining, individuals are better able to understand and appreciate routine aspects of their place (Case, 1996). Together, these behaviors contribute to the construction and expression of the person–place bond.

Another interesting behavioral expression of place attachment is the reconstruction of place, as has been observed in post-disaster cities. Francaviglia (1978) documented the rebuilding of Xenia, Ohio, a town that was devastated by a tornado in 1974. The destruction gave planners the opportunity to rectify planning problems that had existed prior to the disaster, such as the decline of downtown and increased suburbanization. Nevertheless, local residents and businesses used their power to override the post-disaster zoning maps that had been proposed, and ultimately, the new Xenia looked much like it had before the disaster. Recreating a familiar town proved more important than addressing planning flaws. Francaviglia discussed the role of place meaning, nostalgia, and the desire to restore meaningful areas to which residents were attached. Similar acts of reconstruction have been observed, such as those following the 1976 earthquake in Friuli, Italy (Geipel, 1982), and the 1964 earthquake in Anchorage, Alaska (Kates, Eriksen, Pijawka, & Bowden, 1977). Familiarity and use took precedence over planners' wishes; residents manifested their attachments by recreating the city to which they were bonded, even if it was flawed.

Another form of place reconstruction occurs when individuals must relocate to a new place. Some choose to preserve the bond by selecting locations that are as similar as possible to the old place (e.g., Michelson, 1976). This was observed among Boston West Enders who, when forced to relocate, selected areas of Boston reminiscent of their previous neighborhood (Gans, 1962).

Place attachment behaviors are not necessarily territorial, although the two may overlap, given that place use is an element of both (e.g., Altman, 1975; Williams, Patterson, Roggenbuck, & Watson 1992). Territoriality is based on ownership, control of space, and the regulation of access to self (Altman, 1975), but attachment to places is an affective, proximity-maintaining bond that can be expressed without an underlying purpose of control, especially for public spaces such as parks or cafés, or sacred spaces. Further, territorial behaviors include marking, personalization, aggression, and territorial defense, whereas place attachment behaviors include pilgrimages, social support, and place restoration.

The behavioral level of place attachment, therefore, is founded on the desire to remain close to a place, and can be expressed in part, by proximity-maintaining in concert with journeys away, place reconstruction, and relocation to similar places.

4. The place dimension of place attachment

Perhaps the most important dimension of place attachment is the place itself. What is it about the place to which we connect? This dimension has been examined at various geographic scales (e.g., a room in a house, a city, or the world; Cuba & Hummon, 1993; Low & Altman, 1992), and has typically been divided into two levels: social and physical place attachment (e.g., Riger & Lavrakas, 1981). Hidalgo and Hernández (2001) measured the social and physical levels of place attachment at three different spatial levels (home, neighborhood, and city). They found that the strength of the attachment differed depending on the level of analysis: greater place attachment emerged for the home and city levels than for the neighborhood level, and the social dimension of place attachment was stronger than the physical dimension. Nevertheless, the Hidalgo and Hernández stress that physical and social attachments both influence the overall bond, and that spatial level should be considered when measuring place attachment. Riger and Lavrakas (1981) suggested that social attachment, or "bondedness" consists of social ties, belongingness to the neighborhood, and familiarity with fellow residents and neighborhood children, and that physical attachment, or "rootedness" is predicted by length of residence, ownership, and plans to stay. Others have also described a combined physical-social place attachment (e.g., Mazumdar & Mazumdar, 2004; Mesch & Manor, 1998; Uzzell et al., 2002).

Nevertheless, much of the research on place attachment (and related concepts) has focused on its social aspect; people are attached to places that facilitate social relationships and group identity. Fried's (1963) study was conducted in a neighborhood that was quite dilapidated, but demonstrated that the strong neighborhood bonds can stem from interpersonal interactions. In another study, attachment in a London neighborhood was based on the ability to frequently interact with relatives (Young & Willmott, 1962). Certain physical features, such as density, proximity, and the presence of amenities and other social arenas influence these interactions (e.g., Fried, 2000), but when the attachment is directed toward others who live in the place rather than to aspects of the place itself, it is considered to be a socially based place bond.

According to urban sociologists, place attachment is necessarily social (e.g., Hunter, 1974, 1978; Kasarda & Janowitz, 1974; Gans, 1962), and as such it is sometimes compared to (e.g., McMillan & Chavis, 1986), or conflated with (e.g., Perkins & Long, 2002; Pretty, Chipuer, & Bramston, 2003) "sense of community." Community is "a complex system of friendship and kinship networks and formal and informal associational ties rooted in family life and on-going socialization processes" (Kasarda & Janowitz, 1974, p. 329). Two types of community have been distinguished: community of interest, where members are connected through lifestyle and common interests, and community of place, where members are connected through geographical location (McMillan & Chavis, 1986; Nasar & Julian, 1995). Communities of interest are not always place-bound, such as in the case of online, professional, or religious groups that are connected without reference to a place, and so this term is not specific to place attachment. Community of place, however, is more relevant to our framework because it describes social ties rooted in place, such as neighborhoods, coffee shops, or other spaces that support social interaction.

According to Hunter (1974), local sentiments and ties are created by the broader social system of mass society, which dictates status based on class, race, and religion. Individuals of similar status and life-stage select the location and type of dwelling according to their lifestyles and economic constraints. As a result, pockets of relatively homogeneous communities emerge, and within these neighborhoods, interpersonal attachments and networks develop. Kasarda and Janowitz (1974) investigated whether local community sentiments can persist in mass society (i.e., the systemic model) or erode as population size and density increases (i.e., the linear model). Support was found for the systemic model: length of residence was associated with greater social ties, including the number of local acquaintances, friends, and relatives. These social bonds, in turn, predicted local community attitudes and sentiments.

Similarly, other community attachment researchers (e.g., Woldoff, 2002) assume that attachment to a place means attachment to those who live there and to the social interactions that the place affords them. Lalli (1992) notes that spatial bonds become important largely because they symbolize social bonds. Thus, part of social place bonding involves attachment to the others with whom individuals interact in their place, and part of it involves attachment to the social group that the place represents. This latter type of attachment, and recognition that the place symbolizes one's social group, is closely aligned with place identity (Twigger-Ross & Uzzell, 1996); one is attached to the place because it facilitates "distinctiveness" from other places, or affirms the specialness of one's group. Civic place attachment is an instance of group-symbolic place attachment that occurs at the city level (e.g., Hidalgo & Hernández, 2001; Vorkinn & Riese, 2001). Nationalism is another example of attachment to, and identification with, a place representative of one's group, but on a broader scale (Bonaiuto, Breakwell, & Cano, 1996). These definitions suggest that social place attachment can sometimes center upon the place as an arena for social interactions, or as a symbol for one's social group.

However, attachment obviously can also rest on the physical features of the place. The definition of place dependence, for instance, highlights the physical characteristics of a place as central to attachment because it provides amenities or resources to support one's goals (Stokols & Shumaker, 1981). The types of places that individuals find meaningful represent a broad range of physical settings, from built environments such as houses, streets, certain buildings, and non-residential indoor settings, to natural environments such as lakes, parks, trails, forests, and mountains (Manzo, 2003, 2005).

The level of specificity of the physical attachment is important. For example, one study examined whether attachment to a specific place, namely the Rattlesnake Wilderness in Montana's Lolo National Forest, differs from attachment to a class of places, such as "wilderness" (Williams et al., 1992). Those with greater place-focused attachment were less willing to substitute "their" place for another. Those whose attachment was more wilderness-focused were more likely to have visited other wilderness areas, and belong to a wilderness organization.

A related concept, environmental identity (Clayton, 2003), refers to the inclusion of nature into one's self-concept. Clayton notes that self-definitions aligned with parts of the natural world may stem from a general attachment to nature. Again, this emphasizes that place attachment may be directed toward a physical aspect of the place – in this case nature.

How do physical features come to affect the formation of the place attachment? The meaning-mediated model of place attachment (Stedman, 2003) proposes that individuals do not become directly attached to the physical features of a place, but rather to the meaning that those features represent. Stedman showed how a developed area may symbolize "community," or an underdeveloped area may symbolize "wilderness." The physical aspects constrain the possible meanings a place may adopt, and therefore, physically based place attachment rests in these symbolic meanings. One physical feature that influences place attachment is climate, especially when it resembles the climate of one's childhood (Knez, 2005). The meaning-mediated model might explain this finding through symbolic associations: one is attached to the physical climate because it represents one's past.

In sum, three dimensions of place attachment are postulated: person, psychological process, and place. Given the complexity of person–place bonding, many threads tie individuals to their important places. Some are stronger or more salient than others, several are twisted together and seem inseparable, and few are apparent to outside observers. The tapestry that describes the nature of one's relationship to a place is unique for each individual.

5. The functions of place attachment

According to our person–process–place (PPP) framework, place attachment is a bond between an individual or group and a place that can vary in terms of spatial level, degree of specificity, and social or physical features of the place, and is manifested through affective, cognitive, and behavioral psychological processes. However, the question of why people develop such enduring psychological bonds with place remains. Most likely, place attachment bonds exist because they serve several functions. Of those speculated upon in the literature, the most common include survival and security, goal support, and temporal or personal continuity. Implicit in each of these proposed functions is a particular definition of place attachment, which will be discussed in relation to the PPP framework.

5.1. Place attachment for survival and security

One perspective is that place attachment arises because certain places offer survival advantages. Using the framework, we can classify this perspective as one that emphasizes the physical aspects of the place (i.e., resources), and focuses on the behavioral and cognitive expressions of the attachment. The behavioral bond is expressed by maintaining proximity to places that supply the necessities of food, water, shelter, and other resources (e.g., Shumaker & Taylor, 1983), and the cognitive bond is the knowledge and familiarity of how these resources may be extracted or used within the place (Turnbull, 1987). Discussions of place attachment as survival typically occur at the individual level of analysis.

The view that place attachment supports physiological need satisfaction is comparable to Freud's (1940, p. 188) claim that interpersonal attachment develops because the mother satisfies the infant's physiological needs; he writes, "love has its origin in attachment to the satisfied need for nourishment". Bowlby (1969), however, rejected Freud's theory, and argued that attachment functions to provide a sense of security, as shown in Harlow's (1961) study of infant rhesus monkeys that were separated from their mothers at birth, and given replacement "mothers" made from either wire or cloth. The monkeys exhibited attachment behaviors (e.g., clinging when frightened) towards the cloth "mothers" even when the wire monkeys provided milk. Bowlby suggested, therefore, that attachment forms not because it satisfies physiological needs, but rather, because it offers a sense of security and comfort.

Similar security-seeking motives may explain place attachment; indeed, several authors have alluded to safety and security as a function of place attachment (e.g., Chatterjee, 2005; Fried, 2000; Fullilove, 1996; Giuliani, 2003). Security perspectives on place attachment describe the bond as one of positive affect, cognitions of

reduced risk, and proximity-maintaining behaviors. Fried (2000) argued that individuals maintain proximity to their significant place because it offers protection and a sense of security, which in turn, increases confidence and allows for exploration. That is, once closeness enhances feelings of safety, individuals are more willing to venture from their places. In the event of a personal threat, individuals may exhibit a sort of "clinging" behavior by reducing their range and remaining close to home. Furthermore, just as attachment behaviors are stronger among vulnerable individuals (e.g., someone who is pregnant or sick), Fried suggested that place bonds are often more intense among vulnerable populations (e.g., immigrants). Thus, the strong emotional bonds of place attachment, and its proximity-maintaining behaviors as well as contrasting journeys away (e.g., Case, 1996), result from the sense of safety and security that a place imparts.

5.2. Place attachment for goal support and self-regulation

Safety alone, however, does not fully explain place attachment. Individuals also become attached to places that support the pursuit of their goals. This perspective suggests that the positive affective content of the bond results from successful goal pursuit, the cognitions consist of expectations of goal attainment based on past experiences, the behavior expressed is repeated place use, and the place focus is social or physical, depending on the particular goals sought (e.g., Kyle, Mowen, & Tarrant, 2004; Proshansky et al., 1983). This can lead to place dependence, a type of attachment in which individuals value a place for the specific activities that it supports or facilitates (Jorgensen & Stedman, 2001; Moore & Graefe, 1994). Stokols and Shumaker (1981) found that attachment forms when a place provides the resources required for goal attainment, and the use of those resources is frequent. For example, a kite surfer who visits a particular lake every weekend may be attached to the place for its ideal wind conditions.

Others argue that the main function of place attachment is to indirectly support one's goals by facilitating the self-regulatory processes necessary for goal attainment (Korpela, 1989). Self-regulation is the process in which current behavior is compared to one's greater goals and standards in order to evaluate progress towards the goal (Carver & Scheier, 2001). Emotions provide feedback about the level of success, and self-control keeps the behavior focused toward the goal. However, self-control is a limited resource that cannot function optimally under cognitive load (Wegner, 1994). Because place attachment enhances positive emotions and allows for cognitive freedom, emotions can be regulated and cognitive load can be reduced. In particular, place attachment serves self-regulation because favorite places have restorative qualities (Korpela, 1989). In several studies of children's favorite places, reported experiences of place visits tended to have a restorative theme (Korpela, Hartig, Kaiser, & Fuhrer, 2001; Korpela, Kytta, & Hartig, 2002). Restoration within a favorite place improves self-regulatory processes by providing a secure, comfortable environment conducive to self-reflection, problem-solving, and stress relief. A favorite place is a safe haven, where individuals can plan for the implementation of their goals, and can evaluate their progress. These findings reflect studies which show that interpersonal attachment supports self-regulatory processes (Izard & Kobak, 1991).

5.3. Place attachment for continuity

Another function of place attachment is that it provides continuity. Self-continuity is a stable sense of self, or an awareness of the self as continuous, such that past and future behaviors are linked (Hallowell, 1955; Robinson & Freeman, 1954). This function is partly

supplied from an individual, cognitively based attachment through which individuals identify with a place according to the extent it seems to "fit" the self. That is, individuals are more often attached to environments that they feel match their personal values, and thus seem to appropriately represent them, an experience which Twigger-Ross and Uzzell called "place-congruent continuity."

Place bonds also provide continuity over time (e.g., Twigger-Ross & Uzzell, 1996). This function stems from individual attachment to a place that is symbolically meaningful through memories and connections to the past. For instance, we might be attached to our childhood homes, or to places that seem to link us to those people we have lost. The place serves as a physical representation of important events, and seems to contain their essence, or preserve them. Twigger-Ross and Uzzell (1996) observe that places create continuity across time by reminding individuals of episodes that occurred there in the past, or by allowing individuals to compare their present and past selves ("place-referent continuity"). In this sense, a setting represents part of an individual's personal history.

The continuity function can also exist at the cultural or religious level (e.g., Low, 1990). Places where important cultural events have transpired become meaningful for that group. Behaviors at this level include pilgrimages to a sacred place, designations that the place is an historic site, or stories and myths that convey the significance of the place.

5.4. Other functions

This list of the functions of place attachment is by no means exhaustive. An additional function is that place attachment provides individuals with a sense of belongingness (Giuliani, 2003) – one that is mirrored in the interpersonal attachment literature (e.g., La Guardia, Ryan, Couchman, & Deci, 2000). Another is that attachment to places with distinct social or physical qualities enhance identity and bolster self-esteem (Twigger-Ross & Uzzell, 1996). Some have suggested that place attachment is a precursor for place friendship in children (Chatterjee, 2005).

Further research is needed to fully understand the functions of place attachment and the particular needs that it fulfills. The PPP framework may be used for this purpose, that is, to explore the types of functions at each of the dimensions. For instance, does attachment to place also support goals at the group level? Or, do bonds at varying spatial levels serve different purposes? For example, attachment to one's neighborhood may meet different needs than attachment to one's city. Finally, research could use the framework to name different forms of person–place bonds and examine the functions unique to each type of bond.

6. Testing the multidimensionality of place attachment

The PPP framework assumes that the dimensions and levels of place attachment may overlap, but may also be separable. Therefore, validation of the framework will require evidence that the components of place attachment are as proposed. One approach would be to develop a place attachment measurement instrument, and explore the factors that emerge. Another would be to demonstrate place attachment's multidimensionality by showing that its effects differ depending on the type or level of the attachment (Kyle, Graefe, Manning, & Bacon, 2004; Stedman, 2002; Vorkinn & Riese, 2001). For example, Vorkinn and Riese (2001) showed that Norwegian residents who were strongly attached to specific areas of a municipality tended to express more opposition to a proposed hydropower plant development, but that those who were especially attached to the municipality as a whole were in favor of the development. This supports the view that a simple measure of place attachment does not always predict attitudes or

willingness to oppose threats, and that within the place dimension, the type and level of the attachment must be considered.

In another study, two levels within the psychological dimension of place attachment were shown to exert opposite effects on attitudes toward social and environmental conditions along the Appalachian Trail (Kyle, Graefe, Manning, & Bacon, 2004). Participants with a greater sense of place identity viewed problems along the trail (such as crowding, litter, or noise) to be more important, but those with a greater sense of place dependence perceived problems to be less important. Although few such studies exist, they support the multidimensionality of place attachment by demonstrating that the specific dimensions can have unique effects on other concepts.

7. PPP in relation to other frameworks

The PPP framework structures the plethora of place attachment definitions into a simple, three-dimensional framework. Previous frameworks and models have also attempted to define place attachment, but these definitions are limited. For instance, Fullilove's (1996) conceptualization is exclusive to the psychological process dimension. Woldoff (2002) and Hunter's (1978) models depict place attachment as a mainly social phenomenon, in which place facilitates social ties, and is expressed through community action or informal neighboring, but other conceptualizations show that place attachment is often directed toward physical features of the place, and that it can be expressed through a variety of behavioral modalities. Sense of community (e.g., McMillan & Chavis, 1986) is another concept that details the nature of social attachments, but given that sense of community is not always place-bound (i.e., for communities of interest), it departs from a model that focuses on person–environment transactions. Place identity is also relevant to place attachment, because it is a cognitive-emotional connection of self to place (e.g., Proshansky, 1978), but it does not detail place aspects or behavioral expressions of person–place bonding.

Some models of place attachment have been more inclusive, such as that of Shumaker and Taylor (1983), which defined place attachment as a multidimensional bond between persons and their residential environments. Like the PPP framework, it placed importance on the physical and social aspects of place, and emphasized affect as a key psychological expression of the bond. However, in the twenty-five years since their model was introduced, a collection of studies has accrued which indicate that it too narrowly defines place attachment (e.g., Clayton, 2003; Mazumdar & Mazumdar, 2004). Place attachment is not simply a residential concept, but applies to a variety of places, and the PPP framework allows for this diversity, connecting the different types of bonds into a single overarching concept. Although Shumaker and Taylor emphasized that affect is an important part of the attachment, they did not focus on its behavioral and cognitive components, the latter of which described residents' evaluations of place-worth relative to alternatives. In contrast, the cognitive level in the PPP framework includes memories, schemas, meaning, and knowledge. Finally, Shumaker and Taylor incorporated social and physical place features into their model, but recent studies have shown that these may be further distinguished into social-symbolic and social interaction levels, as well as natural and built levels, divisions which are highlighted in the PPP framework.

A second important multidimensional model of place attachment is that proposed by Low and Altman (1992). Like the PPP framework, it suggests that place attachment consists of different places, actors, and psychological processes. However, Low and Altman suggest that these levels are inseparable, but the PPP framework presents these levels related, yet distinct (as evidenced by their unique effects on other constructs). Another difference lies in the organization of the frameworks. Following trends and debates in the literature, the PPP framework divides the place dimension into social and physical levels (e.g., Hidalgo & Hernández, 2001; Stedman, 2003). Most importantly, the PPP framework is based on a review of both classic and recent studies, and so it is grounded in newer insights and findings.

Although most definitions of place attachment and related concepts fit well *within* the tripartite framework, earlier frameworks and definitions tend to represent pieces of the whole. By connecting these disparate definitions, the PPP framework provides a view of place attachment that is more integrative and inclusive.

8. Uses of the PPP framework

The proposed person–process–place framework of place attachment builds upon previous frameworks and models by incorporating classic and recent empirical findings from a variety of theoretical perspectives. It thus serves as a portrait of place attachment research to date. As Blalock (1969) advised, the first step toward construction of testable theories is to scrutinize the current literature, identify key variables, and, when there are many, reduce them into an organized classification system. The PPP framework endeavors to do just that. It connects and integrates the many constructs within its three dimensions. Therefore, it presents an encompassing, yet simplified view of person–place bonding that is both accessible to those new to the place attachment concept and comprehensive to those already familiar with it. It should stimulate new research by identifying gaps in previous studies, aid in the development of assessment tools, and categorize types of place attachment for planning purposes and related conflict resolution strategies.

8.1. Organization and accessibility

Those new to the study of place attachment have likely struggled with its multitude of terms and varying constructs; as some have warned, definitional inconsistencies can hinder progress in the field (e.g., Giuliani & Feldman, 1993). The PPP framework, however, showcases the diversity of definitions and structures them into an organized, coherent framework that is based on empirical works from different disciplines. Thus, the concept of place attachment becomes more coherent, broad, and accessible. For this reason, the framework could also serve as a teaching tool for introducing place attachment, or it could further clarify the construct for those who are already familiar with aspects of place attachment.

8.2. Definitional and methodological uses

Some definitions of place attachment, such as proximity-maintaining behavior (e.g., Hidalgo & Hernández, 2001), or social "bondedness" and physical "rootedness" (Riger & Lavrakas, 1981) emphasize particular aspects of the attachment, and have contributed to the diversity of the construct. However, relating such relatively narrow definitions to the broader construct of place attachment, and understanding how these terms fit together, can be difficult. Given that the PPP framework is multidimensional and comprehensive, researchers should be able to use it to situate their topic-specific definitions of place attachment within the tradition of place attachment research. For instance, future definitions of place attachment could refer to the framework to specify the relative importance placed on each of the dimensions: is the attachment individually or collectively based? Is it experienced affectively, cognitively, and behaviorally? What is the place

component of the attachment? As researchers begin to investigate place attachment according to its dimensions, knowledge about the construct will be more easily organized and synthesized. Research may be located within a common framework, rather than conducted idiosyncratically in each study. In addition, this may guide the development of quantitative instruments. Researchers could include items, for instance, from one of each of the psychological process levels or justify why some levels are of interest to the study but the others are not. For qualitative studies, the framework could be used to develop semi-structured interviews, in which question categories are based on each of the framework's three dimensions.

8.3. Heuristic value

Importantly, the PPP framework should stimulate new research. After simplifying and organizing the constructs, a next step is to further simplify the framework such as by exploring the frequencies of different combinations of the levels (Blalock, 1969). Combinations that are incompatible, or low in frequency, may be excluded from a resulting typology (Blalock, 1969). This endeavor would be of particular interest to the study of place attachment: which combinations of the levels are most and least common for which individuals, groups, or places? Furthermore, interactions between the proposed dimensions and levels could be examined. For instance, would individually based place attachment differ from collectively based place attachment in terms of the prevalence and content of related behaviors, cognitions, and emotions?

The PPP framework will also contribute to other levels of theorizing, including inventories of causes and effects (e.g., Blalock, 1969), which can then be used to identify gaps in past research. Inventories about causes would help to clarify the influence of the different levels of place attachment on other concepts. Discrepant findings caused by definitional differences would become more apparent, and the unique effects of the various dimensions on other concepts could begin to be assessed. Isolation of the levels most important to such concepts has applied value, for example, in understanding the effects of place attachment on pro-environmental behavior. One possibility is that civic and natural attachment might influence pro-environmental behavior in different ways. That is, the levels of place attachment that are conceptually related to a specific behavior may predict that behavior much better than a general measure of place attachment.

Inventories of effects would help to explore the influence of various predictors on place attachment. Research might compare the effects of personality types, cultures, and environments with objectively different properties on the different levels or typologies of place attachment. For instance, does the frequency of the levels within the framework differ among collectivistic and individualistic cultures? How does the psychological content of the bond differ for those who are attached to natural versus non-natural places? Several studies have described the development of place attachment (e.g., Fried, 2000; Hay, 1998; Low, 1992), but these processes may not be relevant to each of its dimensions. Future research could, therefore, investigate whether the development of place attachment in general is applicable to all of the dimensions, and if not, explain which differences exist. For example, what are the determinants of place attachments that are more physically or socially based? This knowledge would be useful for those who wish to encourage the development of certain types of place attachment.

8.4. Applied uses

The framework is also relevant to applied settings. One example is in planning and land-use decisions. Plans that incorporate or enhance elements central to the meaning of the place are better-

received, and so a clear understanding of individuals' attachment is an important part of successful planning (e.g., Manzo & Perkins, 2006). Furthermore, conflicts can arise from planning when places mean different things to different people. Manzo and Perkins proposed a consensus-building approach to conflict resolution in this domain. The end goals are to create shared values and social capital among the factions, but the unique place meanings held by each must first be unearthed. Manzo and Perkins did not, however, propose a method to reveal these meanings and characterize each group's attachment. The PPP framework will complement this, and other planning situations that benefit from analyses of person–place bonds. Specifically, open-ended questions based on the framework could be used to facilitate discussion and arrive at an understanding of the particular nature of individuals' attachments. If other, less comprehensive place attachment frameworks were used, key elements of the bond could be overlooked.

9. Conclusion

This review of the various definitions of person–place bonding organizes them into a clear three-dimensional framework. This synthesis of the place attachment construct can be used in theoretical explorations and in practical domains. This is not to say that all levels of the place attachment concept must be examined in each study, but that definitions of place attachment should be specified according to their relative emphasis within each of the person, process, and place dimensions. Future research on the unique effects and functions of the dimensions, and the different levels within them, will lend further support for the framework's structure. The refinement and use of the PPP framework will clarify understanding of place attachment's relations to other concepts, and provide consistency in place attachment research. Ultimately, the PPP framework portrays the diversity of place attachment definitions that have accrued thus far, and offers a coherent structural alternative to the related concepts that previously remained scattered in the literature.

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