## The psychology of place attachment

CITATIONS
29
READS
33,706

2 authors:

Leila Scannell
Royal Roads University
20 PUBLICATIONS 3,506 CITATIONS

SEE PROFILE

READS
33,706

READS
33,706

READS
33,706

READS
33,706

READS
30,706

SEE PROFILE

RObert Gifford
University of Victoria
200 PUBLICATIONS 14,934 CITATIONS

SEE PROFILE

Some of the authors of this publication are also working on these related projects:

Project

Alberta Resilient Communities Project (ARC) View project

#### CHAPTER 9:

# The Psychology of Place Attachment

LEILA SCANNELL AND ROBERT GIFFORD

#### **What is Place Attachment?**

Defining Place Attachment: Person Place Process Framework

Related Constructs: Place Identity and Place Dependence

## Place Attachment Measures and Methods

Self-reported Place Attachment
Qualitative Approaches to Place Attachment
Other Measures and Methods

#### **Influences on Place Attachment**

Personal Factors
The Social Context
The Physical Context
Culture and Ethnic Factors

#### Psychological Outcomes of Place Attachment

Place Perception
Place Preservation and Pro-environmental
Behavior

Place Loss

Well-Being

#### **Theories of Place Attachment**

Developmental Theories of Place Attachment Place Attachment: Parallel with Interpersonal Attachment?

Place Processes

The Meaning-Mediated Model
Stages of Place Attachment Disruption

#### Place Attachment and Environmental Design

Coffee Shop Design for Place Attachment Place Attachment in Retirement Communities



"Home is not simply a mark upon a map any more than a river's just water. It is the place at the centre of the compass from which every arrow radiates and where the heart is fixed. It is a force that forever draws us back or lures us on. For where the home is, there lies hope. And a future waits. And everything is possible."

—HEIDI THOMAS, Call the Midwife BBC TELEVISION SERIES, SEASON 2, EPISODE 7

"I STILL CAN'T BELIEVE THEY WANT TO TRANSFER YOU TO THE NEW OFFICE," SAID JANE. "Work wouldn't be the same without you. Any thoughts on the move now that you've gotten to know the town a bit better?"

Amber frowned. "It was good that we were able to help set things up in person. But to be honest, I'm still undecided. They want a response by Monday."

The seatbelt sign lit up. "Good afternoon ladies and gentleman. We are nearing our destination. Thank you for flying with us today. Prepare the cabin for landing."

Jane pressed her forehead to the window and looked down. The city appeared miniature.

Amber leaned over to take a look. "I sometimes forget how much I love this place until I'm away from it."

"How long have you lived here?" asked Jane.

"About 15 years now. When I moved here with my parents, it felt familiar — like we instantly fit in to our neighbourhood. It's still so strange that they sold their house and moved downtown. I wish I could see the inside again. Our place was west of City Hall. It's right next to that big pond. See it?"

Jane nodded. "I love that part of town. So much character."

"Growing up, it seemed to be the most perfect neighbourhood in the world. We'd often play down in the ravine when we were kids. These days, I bring the dog there for walks sometimes, and it feels like stepping into the past."

"I know what you mean," said Jane. "There's where I play soccer. Oh—and there's the inner harbor. Tom and I went kayaking on our first date. And then there's Tom's grandfather's house, which he just inherited. If you look north west, you can see a chain of islands. That's where we go camping sometimes. It's like this city helps you to map out your life."

"This is a great city," said Amber. "Leaving for a new job would be really tough."

"I know," said Jane. "I'm pretty sure that I'll never move, if I can help it."

TAKE A FEW MINUTES AND THINK OF A PLACE THAT IS MEANINGFUL FOR YOU—a place that you really feel connected to. This could be any type of place, from any time, for any reason. Perhaps it is a childhood home, a favorite camping spot, a city you long to return to, or the country where you were born. Maybe it is your bedroom, a particular park bench, a place of spiritual significance, or the place where you first met your significant other. Most people can readily conjure up at least one place that is important to them. This cognitive-emotional bond that individuals develop towards places is known as place attachment.

After we have long or intense experiences with them, places can acquire great personal meaning. In contrast, most of the appraisals already discussed may be made after brief exposure to a place, although our appraisals of its quality or beauty might change after we have had the benefit of longer experience with it. Place attachment has some serious implications; it can even kill. In a later chapter we shall see that a major reason people often do not abandon locations that are prone to deadly natural hazards such as floods, earthquakes, and hurricanes is their deeply felt connection to a place.

Place is the setting for life's actions. It is where we conduct our day-to-day activities, where we journey to, and where we and our ancestors have traversed. Because of this, place attachment finds a home across disciplines, albeit sometimes by different names or related constructs. Humanistic geographers, for example, have described topophilia, meaning love of place, and "sense of place," which is often defined similarly to place attachment.<sup>1,2</sup> Sociologists and community psychologists discuss "community ties" and "sense of community." Indeed, these disciplines generated the bases of research on affective ties to place.

Environmental psychologists were drawn to the topic in the 1980s and 1990s, as part of the overarching inquiry into the interactions between the physical environment and the individual. Earlier work focused more on territoriality and residential satisfaction, but since then, psychological research on place attachment has expanded. For example, a literature search on PsycInfo using the terms "place attachment" and "sense of place" published in psychology

journals revealed that place attachment research has nearly quadrupled in the past 20 years. Many of these studies have aimed to define exactly what the nature of personplace bonds seems to be. This has resulted in many types and subtypes of place attachment which, once taken together, give a sense of the variety of attachments that can be developed towards meaningful places.

### **Defining Place Attachment: Person,** Process, Place Framework

RECOGNIZING THE NEED TO TAKE STOCK of the many definitions of place attachment, we organized them into a tripartite framework, consisting of person, place, and process dimensions (Figure 9-1).4 Thus, given any place attachment, the framework leads us to consider who is attached, what they are attached to, and how (psychologically) they are expressing their attachment.

Who is Attached? The person dimension describes the people who are attached, and whether their attachment rests in individually based meanings (e.g., personal experience), collectively based meanings (e.g., cultural or religious significance) or a combination of both. Specifically, the attachment may be at the individual level when the place is meaningful for personal reasons, such as the memorable events that occurred there. For example, someone might be attached to Montreal because that is where she lived when she first moved away from her family home to go to university, and thus where she experienced the milestones of young adulthood. The attachment may be at the collective level when the place is meaningful as determined by group members; for example, many Jews are attached to Israel because the religion has designated this place as sacred.<sup>5,6</sup>

How Are They Attached? The second dimension is the psychological process dimension, which refers to how we express and experience our attachments through affect, cognition, and behavior. Bonds toward a place include an affective, or emotional component, and many place attachment researchers define place attachment as having some sort of emotional bond. Most of these emotions toward the important place are positive, such as feeling love, happiness, joy, pride, and contentment when going to (or thinking about) one's place.7-11 However, individuals can sometimes hold negative or ambivalent feelings toward their important places when they represent painful memories or when the place has disappeared or changed.<sup>12</sup>

Our ties to place are also *cognitive*, because they include the knowledge, memories, and beliefs that make a place meaningful. Cognitively, as one becomes attached to a place, they develop a mental representation of that place, containing a mental map and route knowledge of the place's arrangement, 13 as well as other information such as knowledge about the history of the place, and particular place affordances. Other than mental representations of structural and symbolic aspects of the place, cognitive connections to place involve memories of the place, its people, and the events that have occurred there. 14,15

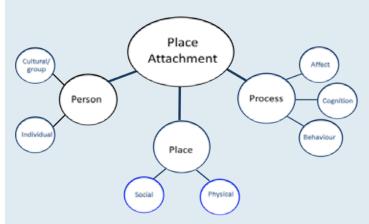
Place attachment is also expressed through particular behaviors. When attached to places where they do not live, people often voluntarily visit that place, sometimes at much cost. Some people return to the same vacation spot year after year. Others make religious pilgrimages to sacred places.<sup>16</sup> For example, most Muslims try to make a pilgrimage to Mecca at least once in their lives if they are physically and financially able.

Interestingly, attachment behaviors can emerge as part of design and construction efforts. New places are sometimes built to resemble residents' former homes or communities. In one study of American Mormons living in Mexico, settlements featured wide streets, fields in town, and manicured lawns, rather than traditional Mexican features.<sup>17</sup> Place attachment also plays a role in the decision to restore places to their original states rather than building anew. After facing destruction from a tornado, the community of Xenia, Ohio was rebuilt close to its former state, reflecting the residents' desire to revive Xenia as they knew it, instead of reinventing it anew.18

To What Are They Attached? The third dimension of place attachment is the place dimension: what is it about the place that we are attached to? Attachments can center on a variety of place types of different scales, but researchers tend to emphasize the social and physical qualities of the important place, given that place attachments can be rooted in social ties or can stem from aesthetic or landscape features. These social and physical qualities will be elaborated upon later.

#### **Related Constructs: Place Identity** and Place Dependence

WE HAVE SEVERAL KINDS OF PSYCHOLOGICAL TIES TO PLACES. Each taps a slightly different aspect of how we



**FIGURE 9–1** The person-process-place framework of place attachment (Scannell & Gifford, 2010a)..

relate to the important places in our lives. Besides place attachment, two others deserve mention.

Place Identity. Although place identity is related to place attachment,19,20 it is distinct: place identity is about one's incorporation of a place into the larger concept of self.<sup>21,22</sup> It endows a person with a sense of continuity, self-esteem, self-efficacy (a sense of being able to get things done), and a sense of distinctiveness (from people who live elsewhere).<sup>23</sup> Thus, who we are can also include where we are. We give ourselves names that reflect our place attachments: Britain has its Fenmen, the United States its New Yorkers, and Canada its Maritimers. University students identify with their schools, and residents of counties, states, districts, provinces, and territories identify with these jurisdictions. At smaller scales, many people identify with their neighborhoods, boroughs, farms, or even houses.

Place Dependence. Sometimes called "functional attachment," place dependence refers to the ability of a place to satisfy needs and goals, or the extent to which the physical characteristics of the place provide the appropriate resources for one's preferred activities.<sup>24, 25</sup> That is, we become dependent on places when their features are congruent with our goals. Generic place dependence is attachment to a certain category of place, based on its function. For example, mountain bikers might be attached to communities that are close to good mountain bike trails (Figure 9-2). Geographic place dependence is attachment to a particular place, based on its function. For example, some mountain bikers might be attached to the Great Divide Mountain Bike Route, a trail of more than 4,000 km that runs from Banff, Canada to New Mexico, USA, because it provides them with optimally challenging terrain.



FIGURE 9-2 Places of attachment can support our preferred activities and hobbies.

IN SUM The various definitions of place attachment have been organized into a tripartite framework, including, person, place, and psychological process dimensions. A variety of related concepts, such as topophilia, sense of place, sense of community, place identity, and place dependence have also been proposed.

RESEARCHERS WHO STUDY PLACE ATTACHMENT have generally taken one of two approaches: (1) a quantitative approach, where the strength and type of the attachment is translated into numeric terms appropriate for further statistical analyses (e.g., such as investigating correlations among place attachment and other constructs), or (2) a qualitative approach, where the varied meanings and personal experiences of the attachment are articulated by individuals, and then summarized into prominent themes by researchers. Because each method has its limits, a greater diversity of approaches to research methods and measurement will be important for future studies on place attachment.

#### Self-reported Place Attachment

One method of ascertaining individuals' feelings, thoughts, and motivations is simply to ask them. Not all psychological constructs can be observed, and survey research offers a feasible way to gather information about one's inner processes. This is especially relevant to place attachment because its cognitive-emotional elements are not easily observable.

The majority of place attachment research in environmental psychology measures the strength of the bond between persons and places with self-reports. 26-32 Items on the Sense of Place Scale assess the degree of various aspects of attachment to lakeshore property, including affect (e.g., "I really miss my lake property when I'm away from it for too long,") cognition, conceptualized in their scale as place identity ("My lake property reflects the type of person I am"), and behavior, conceptualized as place dependence ("My lake property is the best place for doing the things that I enjoy most").33

The variety of questions and types of attachments assessed in such self-reports reflects the plethora of place attachment definitions that have been proposed.<sup>34</sup> After measuring place attachment this way, researchers could investigate whether place attachment strength correlates with other variables, such as particular behaviors, or they could explore how the various dimensions of place attachment interrelate.

Unfortunately, some self-report based place attachment studies are weakened by limited measures. Some lack survey development, standardization, or construct validity. One study assessed place attachment with a single, fivepoint Likert item: "Do you think the area in which you live is a good place to live?"35 This problematic item may better cluster with constructs such as neighborhood satisfaction or quality perception rather than place attachment. Using multi-item, reliable measures with established reliability and validity is essential for better place attachment research.

#### **Qualitative Approaches to Place Attachment**

SOME RESEARCHERS EMPHASIZE that place attachments involve rich subjective meanings that cannot be captured by self-reports; for this reason, a qualitative approach may be suitable.36 Similarly, some suggest that qualitative research is the best type of methodology to investigate place meaning because it can better represent the depth and complexity of the bond.<sup>37</sup> Whereas quantitative research identifies and predicts phenomena within a sample that will generalize to a larger population, qualitative research generates a deep understanding of phenomena, such as through case studies or ethnographies. Instead of generalizability, concepts explored through qualitative analyses have transferability; that is, themes that emerge from data can be thought of as abstract concepts with potential relevance to other cases.

Person-place concepts have been explored through semi-structured interviews and other qualitative methodologies. In one study, individuals' descriptions of place memories and meanings were coded into themes and used to develop theories about how place attachment grows.<sup>38</sup> In another, the relation between place attachment and mobility was explored through qualitative interviews with 14 respondents.<sup>39</sup> Qualitative approaches sometimes combine interviews with visual methods such as having participants take photographs, draw, or use maps as points of discussion about their important places. 40-42 Although qualitative methodologies have been of great value in the study of place attachment,43-45 they are limited in their generalizability to broader populations, and in their ability to explicate the causal aspects of place attachment processes.

Combining qualitative and quantitative approaches does not solve the problem, but it can be used to balance some of their strengths and weaknesses. In a study that used mixed-methods, participants marked places on a map with tokens of different psychological importance weights (e.g., 5-50) and place values (e.g., aesthetic value, recreation value, cultural value), and then explained why those places were meaningful to them. 46,47 Such an approach provides numeric data enriched with a description of place meaning.

#### Other Measures and Methods

Experiments. Because self-reports and qualitative methods pose particular limitations, place attachment researchers will need to expand their measures and methods. We have endeavored to begin this expansion in two experiments.48 In the first, we manipulated place attachment by having participants either visualize a place to which they were attached or, for the control group, a place with which they were familiar but not attached. Those who visualized a place of attachment reported feeling stronger current levels of self-esteem, meaning, and belonging. Manipulating place attachment (rather than simply measuring it) allows

researchers to move beyond correlational and qualitative findings, into the realm of experiments where causal conclusions are more likely to be valid.

In the second study, we adapted a method that had been used in interpersonal attachment research49 to investigate whether places of attachment are "sought out" following a stressful situation. Each participant provided a list of names of places to which they were attached, as well as names of places to which they were not attached. Using a reaction time based task on the computer, we then measured "seeking out" a place of attachment according to how quickly participants could identify place attachment words that appeared on their computer screens.

Not surprisingly, participants responded more quickly to names of places to which they were attached compared to names of familiar places, unfamiliar places, or nonsense words. Making a mistake during the word recognition task more stressful; this threat slowed their subsequent performance for every type of word, but interestingly, it improved their performance for place attachment words. Making a mistake is a type of threat that led people to seek comfort from their place of attachment. This supports the idea that we cognitively seek out places to which we are attached when presented with a stressor or threat. Perhaps more importantly, the task is a measure of place attachment that taps into automatic processing and therefore offers an alternative to measuring place attachment using self-reports.

**Observation.** Another way of avoiding some of the biases associated with self-reports and interviews is to observe behaviors that likely represent place attachment. One way to measure behavioral indicators of place attachment is to count proximity-seeking efforts, such as the frequency of homesick students calling home.<sup>50</sup> In general, however, observations of place attachment behaviors are lacking. Field experiments in which place attachment behaviors are observed in varying conditions would add much to the construct and internal validity of place attachment and its processes. A list of observable behaviors that indicate place attachment has not yet been generated, but would be a valuable addition to the literature. Which behaviors do you think would be good indicators of place attachment?

Place attachment research would benefit from measuring it in new ways, and using experiments, observations of people, and other approaches. As a whole, environmental psychology, like some other areas of psychology, relies too much on self-reports; this can introduce mono-method

bias, in which the apparent overlap or agreement between two measures may be shared because both use the same methodology.<sup>51</sup> To reduce this mono-method bias and methodological stagnation, it is crucial that place attachment researchers adopt new operationalizations and research designs.

IN SUM Place attachment is usually investigated through quantitative self-reports, or qualitative approaches, such as in-depth interviews. Both methods have their strengths and weaknesses, but one notable weakness shared by both is their limited ability to make causal inferences. Experimental methodologies where participants are randomly assigned to various conditions, and place attachment is manipulated or measured in new ways, would therefore add much to the validity of place attachment research findings, and would help environmental psychology in general escape the trap of the mono-method bias.

#### **Personal Factors**

PLACE ATTACHMENTS ARE AND HAVE BEEN IMPORTANT TO HUMANS ACROSS CULTURES, PLACES, AND ERAS; however, the type and degree of place attachment can differ depending on various factors, some of which relate to the individual. Time, congruence, mobility, ownership, social status, gender, stage of development, sexuality, and personality differences are some of these personal factors known to influence place attachment.

Time. The most consistent predictor of place attachment is the amount of time that an individual has spent in the place. 52,53 Place attachments do not usually form instantaneously (although this is possible), but tend to strengthen with accumulated positive interactions, and memories that accrue after months and years. Over time, the place becomes a referent for the past, providing an individual with a sense of continuity; this phenomenon is known as placereferent continuity.54

The degree of the individual's history with the place shapes the nature of the attachment.<sup>55</sup> People with little or no attachment, such as tourists, have a superficial sense of place, in which positive feelings rest on aesthetic or entertaining features of the place. Others, such as young children or seasonal visitors, have a developing, yet still weak bond called a partial sense of place that includes positive feelings without a commitment to stay. Longer-term residents develop a more stable bond called a **personal sense** of place. These residents typically possess more local knowledge, larger social networks, and greater community involvement. Stronger still is an ancestral sense of place, the bond that develops among residents who were raised in the place, and that persists even if the person should have to leave it. Finally, the most intense bond is a cultural sense of place, whereby the place is historically connected to one's tribe or cultural group. For example, Maoris in New Zealand may have a cultural sense of place that is deeper than that experienced by non-Maoris. Residential status also has implications for place identity; natives tend to have similar degrees of place attachment and identity, whereas non-natives tend to have lower levels of place identity than attachment.56

Congruence. Although time certainly plays a role in place attachment, it is not always required; sometimes place attachments form more quickly, almost like love at first sight. This is more likely to occur when individuals experience congruence; the term place-congruent continuity describes the sense that a particular place fits with aspects of the self.<sup>57</sup> A newcomer to a rural lake town in British Columbia once told me about his sense of instant connection to the place: "I drove my car around the bend and saw the lake, and at that moment, I knew I was home and would never move away." Faster-forming place attachments can also occur when a person feels that the place has qualities reminiscent of a previous place of attachment, such as similar climate, or other features.<sup>58</sup> This is called **settlement** identity.<sup>59</sup> For example, a prospective homebuyer may seek out a single family dwelling on a cul de sac because her childhood home was in a similar type of neighborhood (Figure 9-3). You might take a moment consider the types of place attachment that you have.

Mobility. If place attachment generally grows with the amount of time spent in a place, then does it decline with increases in mobility? Indeed, some evidence does suggest that individuals who are more mobile tend to have weaker place attachment<sup>60</sup> and, conversely, that people who are more attached to a place are less willing to move away. 61,62 However, mobility certainly does not always undermine the experience of place attachment. 63,64 One obvious reason for this is that even when we move, we can maintain connections to place in a variety of ways, such as place elasticity, in which a place is "stretched" closer to the distant person through communications and media (e.g., Internet, phone, television), and knowing that (usually) we can return to the place when we feel the need to.65

In this increasingly mobile world, many of us become attached to more than one place, forming multiple place bonds.66 In Sweden, frequent travelers (compared to less frequent travelers) had stronger attachment to places of larger scales, such as countries, yet their attachment to the local communities was as strong as that of the lessfrequent travelers.<sup>67</sup> Interestingly, the frequent travelers actually were *more* involved in community and local issues than less-frequent travelers, indicating that their mobility did not detract from their local place attachment. Others have also argued that that "roots" (i.e., place attachment) and "routes" (mobility) are not always at odds.68 For some people, being away can strengthen ties to home through homesickness,69 or through appreciating the qualities of one's place that may have previously been taken for granted.70 Thus, mobility is relevant for place attachment, but it does not always dilute place bonds (Figure 9-4).

Ownership. Owning predicts place attachment.71-73 Those who own their place tend to be more attached, although the direction of this relation is unclear. Does ownership itself increase the strength of the attachment through commitment, time, identity, and other factors, or does feeling an affinity for a place lead people to purchase it? Although ownership is important, it is not essential: people who do not own or control a place can still be attached to it, as is seen, for example, among low-income Americans living in social housing<sup>74</sup> or children who play in green spaces owned by municipalities or landlords.75 Although a lack of ownership can be disempowering for those in place, it does not obviate the existence of the bond.

Social Status. Through indicators such as income, occupation, and level of education, one's social status is related to



**FIGURE 9–3** We can be attached to certain types of places, such houses on culs-de-sac, rather than to specific places.



FIGURE 9-4 Mobility and place attachment are not always at odds.

place attachment. For a long time, place attachment was assumed to be at odds with social status; for example, securing a good job can necessitate moving away from a place to which one is attached. The career path in academia often requires moving to distant universities before attaining a long-term position as a professor. Perhaps because of this, place attachment remains weaker among the highly educated.76

More recently, however, this view has been challenged, after considering that the type of place attachment makes a difference.<sup>77</sup> People stronger in what has been called "everyday rootedness," in which attachment to place is taken for granted tend to have lower levels of education.78 However, people with stronger "ideological rootedness," in which



FIGURE 9-5 Children's favorite places can support their development.

individuals select their place of attachment and are more involved in the community, tend to be more highly educated. Therefore, although social status can be linked to higher rates of mobility and weaker local ties, those with high socioeconomic status also tend to be homeowners who are able to select where they live.79

Gender. This is another personal factor that can influence the meaning and strength of place attachment, although sometimes it does not matter.80 Within traditional (patriarchal) gender roles, home may be a haven for men, but a workplace for women.  $^{\!\scriptscriptstyle{81}}$  Despite this possible ambivalent experience of home for women, their degree of attachment is not always weaker. In Spain, if not elsewhere, women report stronger place attachment than do men at three spatial levels (i.e., home, neighborhood, and city).82 The place attachment of women is more often social, whereas men's attachment is more often based on activities.83 Therefore, the relation between gender and place attachment is complex, and requires further work to disentangle these discrepant findings.

**Development.** Place attachment is relevant to a person's developmental needs. Certainly it is important for children's development;84 a child's favorite places can support play, mastery, and exploration<sup>85</sup> (Figure 9-5), as well as problemsolving and emotion-regulation.86 In addition, the favorite places selected by children are influenced by their range of exploration, their rural or urban residency, their familiarity with and previous exposure to, various environments, and the environmental preferences of their peers.87,88 This varies with temperament: among boys attending a summer camp, those with more negative emotions were likely to select solitary or novel places, whereas those with more

positive emotions were likely to select social places.89 Adolescents with higher academic achievement, fewer social ties, and fewer opportunities for local employment showed declining place attachment over a two-year period, but it remained stable among adolescents who had lower academic achievement, stronger identification with their parents, and stronger religiosity. 90

Place attachments are relevant to developmental processes in young adulthood too, such as providing a suitable location for raising a family and finding work.91 Deciding to stay in a place after university is more likely among those who prioritize wanting a family, and other goals involving affiliation with others. In contrast, those for whom career goals are more central are more likely to decide to leave. Place preferences therefore interact with one's motivations and life goals.92 Place attachment (and in particular, a sense of being connected to place through social bonding) is greater among residents with children.93 Later in life, place ties also assist with social support,94 as well as with self-reflection and connecting to the past.95

Sexuality. The experience of place attachment can also differ depending on one's sexual orientation. For example, lesbian mothers seem more likely to be attached to their residential community when the neighborhood has at least one lesbian-gay-bisexual-transgender (LGBT) organization.96 Not surprisingly, place attachments develop for places where LGBT individuals feel safe and free from discrimination.97 In some cases, LGBT individuals have used place to define their community values and ultimately represent their identities beyond that of sexuality; in West Hollywood, for example, residents have created a community that represents not only their sexualities and genders, but also the creative and progressive political aspects of their identities.98

Personality differences. Our dispositions probably also play a role in place attachment, although this is an understudied topic. In Italy, residents with insecure interpersonal attachment styles (such as being anxious and preoccupied with, or avoidant towards, close relationships) reported weaker attachment to their community, fewer neighborhood social bonds, and lower levels of satisfaction.99 Interpersonal attachment styles therefore seem to affect the nature of the bonds with one's current place, and they also appear to influence ties to a former place. Children with an anxious attachment style are much more likely to experience homesickness than their secure counterparts, who

are more independent and willing to explore while they are away from home.<sup>100</sup>

#### The Social Context

THE PPP MODEL INTRODUCED EARLIER specifies that place attachments vary in their degree of emphasis on the social features of a place. Places often include people, who influence the meaning, experiences, and activities inherent in a place. For example, you might be attached to a place where you often hang out with close friends, or to a place where family members live, or a place where you feel you fit in and belong. As a classic study in Boston showed, attachment is not necessarily reduced by the physical decay of a community,101-103 perhaps because attachment is related to perceived neighborhood quality, and that certainly includes the quality of social relations.104

Social Interactions. The prevalence and kind of social interactions that occur in a given place are associated with place attachment. 105,106 For example, as you would expect, neighborhood attachment is stronger when one lives near acquaintances, friends, 107, 108 and family 109, 110 (see Figure 9-6). Frequent social interactions are important, even including brief amicable verbal and nonverbal interactions with neighbors (e.g., smiling, saying hello), but of course more involved forms of social support, too.111

Social Capital. Sociologists and community psychologists have similarly emphasized community ties. 112-114 Being connected with others in the community can provide individuals with a variety of advantages, ranging from practical support (e.g., sharing childcare, tools and equipment, and carpooling), informational support (e.g., how to perform certain tasks; where to go to access resources), safety (e.g., extra pairs of eyes to mind one's home when they are away), and emotional support (e.g., empathy and caring during times of stress). The advantages that stem from social networks are known as social capital. Collectively, a community can come together to secure needed resources, 115 create and maintain good environmental quality,116 and respond during emergencies.<sup>117</sup> On the flip side, social disorder is destructive to place attachment: Among four types of stressors (physical disorder, social disorder, victimization, and perception of crime), social disorder had the most negative impact on neighborhood attachment.118



FIGURE 9-6 Attachment to place can include connections to family.

Homogeneity. How similar or different are you from your neighbors? In general, neighborhood attachment tends to be stronger when individuals perceive that others are socially homogeneous, or similar to them. 119 Living near others of similar socioeconomic status, religion, and ethnic or racial background for example, although not necessary for place attachment to develop, certainly contribute to one's sense of belonging. Social homogeneity also builds social capital, given that group advantages emerge from proximity to one's in-group.

On the other hand, diversity can be an attractive feature of places, such as when family residents want their children to be exposed to different ways of life,120 or when immigrants are beginning to adjust to living in a new country.<sup>121</sup> Indeed, diversity can be a valued and appreciated aspect of place.<sup>122</sup> Taken together, this research suggests that commonality and difference both play a role in the development and experience of place attachment.

#### The Physical Context

WHICH PHYSICAL FEATURES ARE ASSOCIATED WITH PLACE **ATTACHMENT?** Some researchers find little connection with the local physical environment, 123 but others do find strong connections. For example, evidence shows that one key factor is interaction with nature, either through the creation and maintenance of a garden<sup>124</sup> (Figure 9-7) or access to a natural area. 125 Although place attachment may explain why many residents of contaminated communities do not move away any more often than residents of un-contaminated communities do, 126 polluted communities, not surprisingly, attract fewer new residents. Which other physical features influence place attachment?



FIGURE 9-7 Studies have found links between gardening and place attachment.

**Dwelling.** People who live in single-family dwellings are more likely to be "rooted," longer-term residents with plans to stay, than people who live in multi-unit residences. 127 Better housing quality is obviously important, 128 as is smaller building size,129 possibly because smaller places require less upkeep and can be more easily personalized. Of course, dwellings contain many other physical characteristics, but their impact on place attachment has not yet been thoroughly examined.

Streets and Neighborhoods. At the street level, residents of culs-de-sac develop more attachment to the neighborhood



FIGURE 9-8 Place attachment can be to large-scale places, such as a country, or small scale places, such as a bedroom.

than residents of through streets.130 The noise level and busyness of the street is also important. Women who live on quieter streets are more likely to have a sense of belonging to the neighborhood.131 streets discourage belongingness by restricting space appropriation, the feeling that outdoor areas exist for the use of residents (as opposed to being the domain of strangers who are merely passing through).

The presence in neighborhoods of distinctive

features such as unique physical terrains or urban designs is related to greater identification with the place.<sup>132</sup> Neighborhoods with main streets that serve as central corridors with access to amenities tend to have a greater sense of community than suburban-style neighborhoods or high-density neighborhoods without prominent main streets.133 The design of a neighborhood also appears to foster place attachment. New urbanist communities are designed with narrow streets, prominent porches, and small lots, with the idea of discouraging the use of cars and encouraging walking. Compared with a nearby traditional suburban community, a new urbanist community had greater place attachment and sense of community, perhaps because residents walked more and therefore met their neighbors more, and because the higher density of residences allowed for more natural areas to be left in the community.134

Community Size. Some researchers have wondered whether the population of a community can influence place attachment: do small town residents feel more attached than big city dwellers? The answer to this question is unclear. Sometimes attachment is found to increase as communities are smaller, 135,136 and other times attachment is found to increase as communities are larger. 137 Perhaps community size itself is far less important than other factors, such as the nature of social ties. 138

Scale. Places of attachment vary in their spatial scale, ranging from very small (e.g., a hammock on the deck or a room in a house; Figure 9-8) to medium (e.g., a house or a park or a neighborhood) to large (e.g., a country or a continent). Despite this variation in place types, place attachment has most commonly been examined at the neighborhood level, in part because the phenomenon was investigated extensively by community psychologists. 139 Unlike community size, spatial level does seem matter for place attachment, in a U-shaped pattern: place attachment is usually, but not always, stronger for home and city than for neighborhood.140-143

Similarity of Physical Features across Places. Physical features can link together place attachments, or create categories of places to which people become attached. 144 For example, some of us are city-people; others are suburbanites, and yet others are country folk. As noted earlier, settlement identity is attachment to a specific category of place rather than to a particular place. A person who moves from

one city to another, for example, may experience a smaller disruption or loss of place attachment than a person who moves from one settlement type to another, such as from suburbia to downtown. This allows for a continuity of place attachment even if one must move. Sometimes the transfer centers on a certain physical feature, rather than an entire place category. For example, when a place contains physical features that resemble childhood places,145 or places from one's country of origin,146 or a similar climate, attachment can emerge.

#### **Culture and Ethnic Factors**

PLACE ATTACHMENT IS IMPORTANT TO HUMANS ACROSS CULTURES, PLACE TYPES, AND ERAS. However, its type, degree, and expression does vary cross-culturally. Setha Low reviewed the world literature on place attachment and determined that it has six cultural means of transmission: genealogy, loss and destruction, ownership, cosmology, pilgrimage, and narrative.147,148

- 1. Genealogy links persons with places through the historical identification of a place with a family. For example, one might feel connected to a church where their grandparents were married and eventually buried (Figure 9-9). In some places such as Spain and Japan, people's names and community names are the same, or houses occupied by generations have the same name as the family.
- 2. Loss and destruction sometimes builds or strengthens place attachment. Those who yearned for Israel before it was established, mourn the loss of redeveloped urban districts, or grieve for towns lost in earthquakes develop fierce attachments to places that might exist, and even to places that never again will exist.
- 3. Ownership is a more familiar mechanism through which place attachment can be created. When we own a place for a long time, it becomes a part of us, and we of it. In one culture, people and their places are said to share blood. Ownership need not be in the legal sense; it can be through symbolic or psychological ownership, as when Detroit residents joined together to plant trees in formerly ugly vacant lots, which both improved the landscape and increased their place attachment. 149



FIGURE 9-9 Genealogical links to place include churches and cemetaries.

- 4. Cosmological place attachment refers to a culture's religious and mythological views on personplace attachment. Many places are experienced by their natives as the center of the universe. From a cosmopolitan, objective perspective this may seem absurd (how many places can be the center?), but deep within the cultural meanings of each such place, the center of the town or village or shrine truly is the spiritual center of the world.
- 5. People can be attached to places they merely visit; when a place is sacred to them and they make a pilgrimage there, they experience another kind of place attachment. This sort of attachment usually is religious (Mecca, Jerusalem, Banares, Amritsar), but it can be secular. Serious baseball fans feel an attachment to Cooperstown, New York, where the Hall of Fame stores relics of their heroes; they literally make pilgrimages to the small town.
- 6. The term narrative refers to stories; place attachment can develop through stories that explain the important issues and questions of life in terms of people-place interactions. Stories tell residents how to interact with or respect their land and often include accounts of how the land strikes back if it is not treated properly.

Culturally determined meanings can therefore influence which types of places are deemed worthy of attachment, as well as how the attachment forms and is expressed. Despite these differences, place attachment is prevalent in



**FIGURE 9–10** Studies predict that people who are more attached to a place will perceive it to be less polluted.

many cultures. An analysis of the relation between religion and place attachment shows that connections to place are found in many religious groups and historical periods. 150 Descriptions of places of worship, sacred structures, burial sites, places in nature, and mythical sites abound in ancient and contemporary texts. Other scholars have detailed the importance of place evident in medieval and contemporary literary works. 151 From such works, place attachment appears important across cultures and historical periods.

Scientific interest in place attachment has grown considerably in the last 10 years. Perhaps this has occurred in response to threats to place attachment, including increased human mobility, placelessness, climate change, or other global forces.<sup>152</sup> Although it takes different forms in different places, environmental psychologists tentatively concluded that it is virtually a universal human experience.

IN SUM Several personal factors, including the length of time spent in a place, the degree of congruence between a place and one's identity, one's mobility and social status, place ownership, gender and sexuality, developmental goals, and personality attributes, have been identified as relevant to place attachment. Social ties can also contribute to, or stem from, one's place attachment. Place can become meaningful through interactions with others, and the resources, or social capital, we derive from such interactions. Homogeneity and diversity are two other social factors important to place attachment. Some physical and design features have been found to predict place attachment. Cultural factors also

influence which places one becomes attached to, how this attachment develops, and how it is expressed. Despite variations in it, place attachment is common or even universal across cultures, past and present.

PLACE ATTACHMENT IS A PHENOMENON THAT GIVES US IN-SIGHT INTO THE HUMAN EXPERIENCE. As Edward Relph declared, "to be human is to live in a world that is filled with significant places: to be human is to have and to know your place."153 Therefore, environmental psychologists recognize that person-environment interactions are sometimes founded on deep emotional ties to places. Place attachment can also help us understand and predict a variety of other outcomes. It has implications for perceptions, behaviors, and emotional outcomes.

#### **Place Perception**

THOSE WHO ARE ATTACHED TO A PLACE perceive it differently from those who are not attached. You may come to know every path and corner and hidden staircase of a place to which you are attached; the casual visitor does not. Beyond these detailed mental maps, places of attachment are imbued with personal meanings and layers from the past. Further, because an important place often merges with aspects of one's self-identity,154,155 place perception can be unconsciously motivated by self-serving biases: the general finding is that place attachment has a positive influence on place perceptions (Figure 9-10). In other words, being attached to a place is like wearing rose-colored glasses, and its flaws and dangers become less apparent. For example, Israelis living in the Gaza strip (i.e., prior to the 2005 disengagement) who were more attached to the area perceived Gaza as less dangerous.156

This perceptual bias appears common for many types of places of attachment. Residents who identify with downtown have more positive views of downtown (despite the

fact that downtown neighborhoods contain more mixed land uses, traffic and parking problems, noise, crowding, stress, danger, and pavement), and those who identify with suburbia have more positive views of suburbia. 157,158 Residents who are more attached to their neighborhoods perceive fewer problems on their block, such as suspected drug dealings, graffiti, traffic, and noise.159

Perceptions of natural environments can similarly be distorted among the attached. Lakeside property owners are more attached and more satisfied with certain attributes of a lake, such as its scenery, water quality, and number of users.<sup>160</sup> Attachment to an area tends to result in higher attractiveness ratings of landscapes in that area.<sup>161</sup> Consistent with these findings, individuals with a strong sense of local and national identity perceived fewer pollutants on local and national public beaches (respectively) than those who identified less strongly with them.<sup>162</sup>

Social identity theory<sup>163</sup> can help explain this tendency of strongly attached and identified residents to inflate the positive qualities of their neighborhoods.<sup>164</sup> Identity gains definition through one's social groups as well as the places to which one belongs, 165,166 and so the attributes of these groups and places have implications for self-esteem. When characteristics of one's group or place are unfavorable, individuals will downplay, ignore, or positively reinterpret them so that self-esteem can be maintained.

So, place attachment seems to alter environmental perceptions, but environments can also influence place attachment. Pleasing physical and social features encourage place attachment by attracting people to an area, and involving them in it.167 Place attachment tends to vary for neighborhoods of objectively different environmental quality. Although, as noted earlier, people tend to view their neighborhood positively, residents of lower-quality neighborhoods identify less strongly with them than residents of higher quality neighborhoods, even when the neighborhoods are similar in size and in the sociodemographic characteristics of residents. 168

In sum, place attachment can alter one's judgments of a place's quality (perhaps as a way to bolster one's self-esteem), and attachments occur more frequently for higher-quality places. Both processes probably operate simultaneously.



FIGURE 9-11 Place attachment can lead us to maintain our place. .

#### Place Preservation and Pro-environmental Behavior

PLACE ATTACHMENT IS NOT MERELY RELATED TO OUR EMO-TIONS AND THOUGHTS; it also has implications for behavior. One of its key behavioral outcomes is stewardship; people want to protect their place, provide the necessary upkeep and maintenance, and preserve its special meanings. For example, those who are more attached to their residence are more likely to make repairs, 169 mow the lawn, 170 and remove nearby litter<sup>171</sup> (Figure 9-11). In general, people will act to defend their place from hypothetical and real threats, such as increases in lake pollution from motorboats,172 a proposed freeway,173 or other large-scale development projects.174

The stewardship behaviors that have attracted the most interest are pro-environmental. People with stronger place attachments tend to perform more pro-environmental behaviors, either as a direct attempt to preserve the place and protect it from damage, or as an indirect result of internalizing the community's values of environmental protection. As one example, youth who had worked on a natural resource project who were more emotionally connected to the place reported engaging in more environmentally responsible behaviors in their day-to-day lives.<sup>175</sup> Sometimes people with stronger place attachment perform fewer proenvironmental behaviors, 176 probably because their place was already fine, and so they did not need to take action.

One way of resolving this discrepancy is to consider the place dimension of place attachment.<sup>177</sup> When individuals are more attached to the community aspects of the place, pro-environmental behavior is likely only if that community espouses pro-environmental values. For example, students who attend a university that is renowned for its



FIGURE 9-12 Thirteen functions of place attachment (Leila Scannell).

sustainability efforts would more likely adopt pro-environmental attitudes and behaviors than students when attend a university with few sustainability efforts. Some communities simply do not prioritize environmental issues, and so pro-environmental behavior will not be influenced by a community-based attachment. Place attachment that is based in the natural aspects of a place, however, is a stronger predictor of pro-environmental behavior. Similarly, people who have a strong environmental identity 178 and define themselves as part of nature, are also more likely to report engaging in pro-environmental behavior.

However, being attached to a place does not always lead to pro-environmental actions. Some inflict environmental harm, such as using pesticides to produce a weed-free lawn, burning wood to create a cozy living room atmosphere, or traveling long distances to faraway places to which one is attached.<sup>179-182</sup> Furthermore, people generally want to protect the meaning of the place to which they are attached, but meanings can vary among place users. For example, a proposed hydropower plant development was opposed by residents who were attached to specific parts of a municipality, but it was supported by residents who were attached to the municipality as a whole.<sup>183</sup> Recreationists who reported a strong sense of place identity with the Appalachian Trail were more concerned about problems such as crowding, litter, and noise. However, recreationists

who reported a strong sense of place dependence viewed the trail as more important for supporting their recreational activities.184

#### **Place Loss**

AT SOME POINT, THROUGH MOBILITY, divorce, conviction of a crime, mental disability, natural or technological disaster, forced re-location, or pure exhaustion in old age, many of us lose our cherished places. Sometimes, the value of a place is revealed most clearly to us when the settings we hold most dear are threatened or lost. One poignant form of community attachment occurs in dying towns that have lost most of their population. In the U. S. Midwest, literally thousands of communities died in the 20th century, and many are barely surviving today.185 Yet attachment to such towns is often intense, perhaps because every factor mentioned above that promotes place attachment is present. That many older residents cling to their dying towns is evidence that economic factors are not the most important aspect of community attachment, 186

Environmental psychologists are keenly interested in how people experience and adjust to place loss. Marc Fried and his colleagues were among the first to recognize and document the effects of displacement, in their classic investigation of a redevelopment project in the West End of Boston.<sup>187</sup> Although the physical quality of the neighborhood was quite dilapidated, the residents (composed mainly of white ethnic immigrants) expressed strong feelings of attachment to their community. The structural improvements planned for the neighborhood meant that the residents would lose their familiar structures and social settings, and that most of the residents would be forced to move. After the reconstruction, residents expressed mourning and displayed symptoms of grief that Fried argued are comparable to the effects of separation from a loved one.

Place Loss Among Aboriginal Peoples. Place loss among aboriginal peoples supports the idea that displacement can have serious psychological consequences.<sup>188</sup> Place meanings often are more conscious and central among First Nations people than among other North Americans. They include, for example, sacred meanings, connections to ancestors, spirits, nature, food, medicines, customs, and ways of life. 189 These strong connections to place make place loss particularly devastating. Aboriginal peoples worldwide have faced

disproportionate dislocation, such as from colonialism, and other actions of those in power. One example is the place loss of the Cheslatta T'En people, whose traditional lands were flooded to create a hydroelectric dam in British Columbia.<sup>190</sup> The dislocation of the residents was forcible and sudden, and farms, communities, and cemeteries were destroyed. Following this, the Cheslatta T'En faced many social and spiritual losses; rates of alcoholism, suicide, health problems, and unemployment increased as a direct result of the loss of their place. Although their well-being has improved in recent years, some scholars have pointed out that few indigenous people fully recover from place disruption.191

Place Loss from Migration. The effects of displacement can also arise from voluntary or temporary migration. If you have ever studied away from your childhood home or traveled for an extended period of time, you may have experienced feelings of homesickness. Those who experience place attachment most strongly may have the most personal difficulty with changing or losing places.<sup>192</sup> For example, Chinese students living in Australia who were not welladjusted had more health problems and lower grades than those who had become somewhat attached to the new environment.<sup>193</sup> The psychological outcomes of moving away from home to a new school or university can sometimes include the loss of sense of belonging, continuity, and selfidentity.194

What can people do to avoid homesickness and displacement? One effective process is interchangeability, which involves seeking out similarities between new and old environments.<sup>195</sup> If a Canadian were living in Taiwan, for example, she might occasionally seek out Western food and other Canadians with whom she can relate. Seeking out areas in the new environment that have home-like qualities is another example of interchangeability. One might feel attached to the beach because her hometown was located near the ocean. Others might bring familiar objects from their homes and be better adjusted. In a psychological sense, a person is not truly displaced when surrounded by referents of home. In general, making links to, and symbolic representations of one's attached place appears to minimize the effects of displacement.

Place attachment also affects how people prepare for anticipated place loss, such as from natural disasters. In India, residents who live in areas susceptible to flooding have different degrees of flood preparedness depending



FIGURE 9-13 We can be attached to places that connect us to the past.

on their type of place attachment: those with genealogical (e.g., family ties) and economic (e.g., investment or ownership) place attachment are more prepared than were those with religious place attachment. 196

#### Place Attachment and Well-Being

PLACE ATTACHMENT HAS IMPORTANT IMPLICATIONS FOR ONE'S WELL-BEING. This notion is supported by studies that document the negative psychological consequences of displacement as well as studies that demonstrate the positive effects of place attachment on well-being. By definition, place attachment is an emotional bond to a place. 197-202 Thus, the experience of place attachment is often characterized by feelings of happiness and comfort.<sup>203</sup> Even in wartorn areas, place attachment is positively associated with life satisfaction.204

The Benefits of Place Attachment. What is it about place attachment that benefits us psychologically? A content analysis of Canadians' written descriptions of their places of attachment that I (LS) conducted uncovered 13 benefits: memories, belonging, relaxation, positive emotions, activity support, comfort, self-growth, control, entertainment, connection to nature, practical benefits, privacy, and aesthetics (see Figure 9-12).

The most common benefit was memories, mentioned by approximately two-thirds of the sample. Important places can memorialize past events and people, provide a sense of continuity over time<sup>205,206</sup> and serve as a symbolic time-machine into the past (Figure 9-13). The place can also serve as the site of ongoing traditions, such as annual



FIGURE 9-14 Activity support is a common benefit of place

holiday gatherings or cultural events.207 Thus, place attachment preserves important memories, and provides the framework for forming new ones.

Belonging was the second-most commonly mentioned benefit of place attachment. It includes feelings of having roots in a place, fitting in, or connecting with others. Indeed, the need to belong appears to be one of the fundamental psychological needs, 208, 209 and ties to a place can help us satisfy it. Places provide belonging when they symbolize one's social group, or offer a venue conducive to meeting up with others.

Places of attachment also frequently offer relaxation. For some, this is the immediate stress relief of coming home after a long day of work, or it is leaving for a meaningful vacation place that allows an escape from the everyday routine. Children also seek out their favorite places for relaxation or coping with negative emotions.<sup>210</sup> As you will read in a later chapter, certain places possess restorative properties that include coherence, compatibility, being away, and fascination; places of attachment are especially likely to contain these four properties. $^{211}$ 

Positive emotions, such as happiness, joy, and love, are also part of place attachment, as is inherent in many definitions and measures of the construct.<sup>212-217</sup> As one person said, "When I'm in [my hometown] I feel at ease, at peace, and happy. The world seems OK again when I'm there."

Activity support was the fifth most-common benefit of place attachment. Places can facilitate one's desired activities and goals. As mentioned earlier, this particular mode of attachment has been termed place dependence, 218,219 in which one becomes dependent on the unique features of a place for enabling a preferred activity. For example, a surfer may be attached to a particular beach or region with reliably big surf (Figure 9-14).

Places of attachment can benefit us by providing physical and psychological comfort. Architects, engineers and interior designers calculate physical comfort as it relates to temperature, noise, lighting, air quality, and design. 220,221 People who are attached to larger spaces, such as cities or regions often cite weather as a source of place-attachment related comfort; some have greater attachment to places with climates that resemble those of their childhood places.222 Comfort is also an important psychological benefit, particularly when a place provides a sense of safety and

Places of attachment can also play a role in self-growth processes, such as introspection, problem-solving, goalsetting, and making personal changes. This could occur either directly, when the place holds opportunities and resources for self-change, such as new people, activities, or environments, or it could occur indirectly, such as when the environment is conducive to problem-solving and contemplation.

A sense of control, autonomy, and freedom can also be helped or hindered by place. People benefit when places of attachment can be altered to suit their needs, offer the freedom to make their own choices, and allow for self-expression. The importance of control over various environmental elements is one theme that recurs in this book, and it certainly is also an important function of place attachment functioning.

Some places of attachment are that because they provide us with entertainment. The level of stimulation in these places is experienced as interesting, novel, exciting, fun, or exhilarating. For example, attachment to a particular city, commercial venue, busy park, or vacation destination might provide this benefit. As you may recall from Chapter 2, slight deviations in environmental stimulation (i.e., from the usual) can be enjoyable.223 Therefore, entertainment and relaxation are both benefits of place attachment where the level of environmental stimulation is

**Connecting to nature** is a need that likely evolved from our early ancestral environments<sup>224</sup> and so many people appreciate places of attachment that enable communion with nature (Figure 9-15). This instinctive connection has the ability to restore positive affect, improve cognitive processes<sup>225</sup> and reduce the symptoms of attention deficit disorder.226

Place attachment may also support well-being when the place provides practical benefits such as access to

services and amenities. Life can be easier with proximity to grocery stores, community centers, and medical facilities, or access to particular types of resource centers (e.g., for single-parents), or support groups (e.g., such as Alcoholics Anonymous). Such features have been linked to neighborhood satisfaction and overall quality of life. 227,228

Privacy is another benefit of place attachment. For example, one person was attached to the Pilbara desert in Australia because it allowed him a chance for solitude. Attachment to an apartment is stronger when the apartment facilitates privacy.229

Place attachments are sometimes formed and continued because of their aesthetic value. Benefiting from the aesthetic features of environments also has evolutionary roots; we prefer aesthetically pleasing environments because those were the ones likely to contain resources or other features conducive to survival.230 Among park visitors, aesthetic features are even more important than natural features,<sup>231</sup> supporting the role of beauty in place preferences.

In sum, place attachment contributes to well-being in at least 13 psychologically relevant ways. These benefits even seem to accrue from place attachment at a distance.

The "Shadow Side" of Place Attachment. Although place attachment clearly is good for our well-being, person-place bonds can be associated with ambivalent emotions and experiences.<sup>232</sup> For example, memories of home can be both joyful and painful. The negative components of place attachment, have been called its "shadow side." 233 If you live in social housing as a result of poverty, your attachment may well involve negative aspects caused by the stigma attached to living in social housing. 234 However, despite the stigma, many residents report a strong sense of community and general residential satisfaction.

Place attachment can also interfere with well-being when one is attached to a place, but lacks control, such as when powerful others impose discordant meanings and policies on it, or in extreme cases, destroy it.235 Another negative outcome of place attachment is "place bondage," when individuals continue to cling to places that inflict harm or fail to meet a variety of other needs.<sup>236</sup> An extreme example would be when residents refuse to leave their homes in the event of a disaster, such as those who refuse to evacuate despite warnings of an impending flood.237

Non-attachment. Some people say that they do not have a place of attachment, challenging the assumption that



FIGURE 9-15 Connection to nature is a benefit of place attachment.

attachment is a good or necessary phenomenon. Indeed, some Buddhist philosophers depict any type of attachment as a negative force in which an individual grasps at or clings to the bond. <sup>238</sup> A state of "non-attachment," in contrast, is said to offer a preferable state of flexibility, a lack of fixation on attachment objects, and tolerance to the impermanence of bonds. In this view, developing attachment bonds is not optimal; rather, learning that such bonds are constructed, mutable representations may be more adaptive.

IN SUM Being attached to a place has a number of psychological outcomes. One is that those who are more attached tend to perceive their place in a more positive light than do those who are less attached. Another implication is that people who are more attached are more likely to take action to protect their place from changes they perceive to be threatening. The negative effects of displacement support the notion that individuals are motivated to maintain attachment to places, and that failure to do so may result in negative psychological outcomes. Aboriginal peoples have historically experienced much place loss, which harm individuals and their entire community. Some processes that appear to aid the transition between old and new environments have been identified. Place attachment usually benefits well-being through at least 13 psychological benefits such as memory support, belongingness, relaxation, positive emotions, activity support, physical and psychological comfort,

as well as several others. The shadow side of place attachment means that it can have certain negative impacts, too. Advocates of nonattachment challenge the assumption that attachment of any sort is good for us.

#### **Developmental Theories of Place Attachment**

SOME THEORIES of place attachment postulate how the bonds initially develop. In childhood, the development of place attachment may intermingle with the processes of interpersonal attachment that occur between children and their primary caregivers, such as parents. One proposal is that children begin to associate the close ties they hold toward their parents with surrounding places.<sup>239,240</sup> That is, home comes to represent Mom and Dad (or another primary caregiver), and so emotional bonds to parents generalize to the child's residence. Over time, the scale of the bond expands from the home to the neighborhood to the broader community, all of which are assumed to provide refuge and a sense of security.

According to a different perspective, when caregivers provide a safe haven, this sense of security enables children to venture out and explore nearby places.<sup>241</sup> Emotional ties to place therefore, are rooted in the mastery, freedom, and adventure that children experience through such exploratory ventures. If threats appear, children may return to the safe haven of their guardians once again. Therefore, place attachment in childhood may stem from secure interpersonal attachments to caregivers. However, not all children are afforded secure interpersonal relationships, which raises questions about whether their relationships with place differ, and which processes are involved in their development of place attachment.

In adulthood, the bonds can develop in at least two ways: place-congruent continuity, in which attachments form to places that seem to represent or fit with self-attributes, and place-referent continuity, in which attachments form to places where links to the past and memories have accumulated.242

The developmental theories of place attachment have begun to paint a picture of how attachment can arise in childhood and adulthood. However, these ideas so far are purely theoretical (without empirical validation), or obtained by having adults think retrospectively about their childhood attachments. Observations of infants and children would add much to the understanding of how place attachment forms and changes over time.

#### Place Attachment: Parallel with Interpersonal Attachment?

ONE WAY TO UNDERSTAND how place attachment, a relatively new topic of study, operates psychologically is to compare it with theories about topics that seem to bear a strong resemblance. One obvious possibility is that affective bonding to places may share some principles with affective bonding to other people. John Bowlby and Mary Salter Ainsworth pioneered the study of interpersonal attachment in the middle 1960s. 243-245 According to Bowlby, interpersonal attachment is an evolved behavior that increases children's chances of survival; those who can remain close to their caregivers are able to receive the care they need and avoid predators and other threats. Specifically, internal or external cues such as threats activate the attachment system, which prompts a host of behaviors (e.g., crying, or seeking out the caregiver) that ultimately allow the child to regain proximity to their caregiver. Once proximity is attained, individuals experience a sense of security. This secure base also enables exploration of the broader environment. Over time, repeated interactions with one's caregiver generate mental models about what to expect in relationship with others.

Many of the processes of interpersonal attachment do appear relevant for place attachment.<sup>246,247</sup> Proximityseeking is not limited to caregivers; people tend to seek closeness to their important places, sometimes in person, and sometimes cognitively. Making a trip to one's hometown during the holidays, daydreaming about a favorite place, or purchasing a home in a certain city or region<sup>249</sup> are all ways of attaining proximity to place. The desire to remain connected to place is also reflected in the naming and building of new settlements.

Like interpersonal attachment, place attachment also seems to offer a sense of security. For some, home is a "haven" where one can obtain refuge from threats<sup>249-253</sup> and it is the secure base from which the broader world can be

explored.<sup>254-256</sup> Finally, as mentioned earlier, separation distress can occur following unwanted place loss, just as distress follows separation from a significant other.<sup>257-259</sup>

Other principles of attachment theory may similarly apply to place attachment. For example, a large proportion of interpersonal attachment research has documented the stable individual differences in relating to other people, called "attachment styles." 260-264 Theorists have considered the existence of comparable styles of relating to place.<sup>265</sup> For example, some people are chronically anxious about losing their place. Others may chronically resist remaining in any one place for long, wanting to move often, and avoid growing roots that are too deep. Others may be "secure" in that they receive comfort from their place of attachment, but are able to leave it, striking a balance between security and exploration. Despite the plausibility of these parallel styles of place attachment, the idea lacks much evidence so far.

#### **Place Processes**

PHENOMENOLOGIST DAVID SEAMON, who studies the richness of individual experiences and the nature of existence, asserts that understanding the key processes of place is an important first step to understanding place attachment. He describes six processes that generate (or erode) place.266 Place interaction refers to the usual actions, routines, and activities that occur in a place. Many routines come together to give the place meaning. For example, in a cafeteria, cooks are preparing and serving meals, some patrons are lining up and purchasing their food, and others are eating. Places of attachment can support particular routines and habits that contribute to the connection over time. Place identity, already described, refers to the merging of self and the physical environment, and it can arise from frequent place interaction; with time, and habitual interaction, place can become part of who we are. Place release is the experience of unexpected, serendipitous happenings in a place. Witnessing a pod of whales in the ocean, running into an old friend in a coffee shop, or happening upon a flash mob downtown are all examples of place release. These pleasurable occurrences punctuate a place as memorable and meaningful.

Place realization refers to the distinctiveness and character of a place. As Seamon says, this would be noticing the "London-ness of London." It is important to place attachment, which tends to be stronger for places of distinct

character.<sup>267</sup> A fifth important place process is place creation, which can occur though design, building, personalization, hosting events, or other means. This process can enhance the other processes, and contributes to feelings of attachment. Finally, place intensification occurs when the design of the place serves the needs of the human activities that occur there. Through design, place interactions and routines are reinforced and become stable over time. For example, a comfortable atmosphere might enhance patronage of a local pub.

#### The Meaning-Mediated Model

#### THE MEANING-MEDIATED MODEL OF PLACE ATTACHMENT

aims to explain the role of physical features such as dwelling type or the presence of nature in encouraging neighborhood attachment to form.<sup>268</sup> According to Richard Stedman, we do not become directly attached to tangible objects or sensory experiences offered by various environments, we bond to the meanings that we have projected upon these places. What does that special park, house of worship, street, theatre, or mountain mean to you? In this model, the physical environment itself limits the possible meanings an environment may acquire; it "sets bounds and gives form to [social] constructions."269 The meanings one may bestow on a park are unlikely to be the same as those one bestows on a street or theater. Certain landscape elements appear particularly important to attachment, such as water quality and level of development, because those elements give rise to certain meanings that are conducive to attachment (or not).

#### Stages of Place Attachment Disruption

HAVE YOU EVER MOVED AWAY from somewhere that you didn't want to leave? If so, the bond to your place may have been disrupted. Disruptions can occur when physical, legal, or social changes interfere with the appearance, use or meaning of the place.<sup>270</sup>

Two models explain the stages involved in such disruption. In the three-stage model, disruption occurs prior to, during, and after the change.271 First comes a period of pre-disruption, before the detachment occurs. For example, this might result from securing a job in another city and preparing to move there. Second, the disruption itself occurs when the person must actually depart. In the third stage, a period of post-disruption, attachments are



**PROSHANSKY** helped found the first graduate program in environmental psychology and produced valuable studies of place identity

reconciled, by maintaining a connection to the old place, establishing new attachments, or both.

A more elaborate five-stage model emphasizes the role of meaning in place attachment disruption<sup>272</sup> Stage 1 is becoming aware of the proposals for place change, and learning about the types of changes that are slated to occur. Stage 2 involves interpreting the meaning of the change, and considering how it will impact oneself and one's place. Stage 3 is evaluating the outcomes of the change, determining whether these will be predominantly nega-

tive or positive. Stage 4 is coping, when individuals consider various coping strategies, such as denial or resistance to the change. Stage 5 is the action phase, when individuals implement the strategy that was previously considered. One key criticism of existing place attachment theories is that they lack dynamism, and are more often descriptive or structural, and less often process-oriented<sup>273</sup>; however, theories of place disruption and development are two that describe the unfolding processes of place attachment.

IN SUM much of the place attachment literature is descriptive, but several interesting theories are now being developed. Developmental theories postulate how place attachment can co-occur with certain developmental milestones. Theories of interpersonal attachment can be used to understand how we relate to place, although this line of research is still new. Phenomenological theories detail key place processes that can affect place attachment. The meaning-mediated model suggests that individuals become attached to place meanings, which are constrained by physical characteristics of the place. Theories of place attachment disruption outline the stages that occur when person-place bonds are broken.

#### **Coffee Shop Design for Place Attachment**

FOR SOME PEOPLE, THE NEIGHBORHOOD COFFEE SHOP is an important place of attachment; you may spend long hours studying there, or you may frequent it on your way to work, or perhaps it is where you convene with your friends on a Tuesday night. Beyond their caffeine supply, coffee shops are social gathering places, and so they have the potential to contribute to a sense of community and local attachment. They can also define the character of a neighborhood. People do form affective bonds to coffee shops.  $^{\it 274}$  Of particular interest to designers and coffee shop managers is which physical features, such as layout and décor, and which social features, such as social support, may promote affective bonding to their venues (Figure 9-16).

To investigate this, three distinct coffee shops in the same town were selected: a converted auto-repair shop, patronized mostly by university students; an artsy-historical space next to a small lake, patronized by local residents, and a large national chain coffee shop with a bookstore attached, patronized by students as well as community members.<sup>275</sup> Observations, interviews, and surveys were used to explore the key social and physical indicators of place attachment to the coffee shops. Using these multiple methods, five physical features were identified:

- 1. Cleanliness is one factor that participants reported would support their repeated patronage, potentially leading to attachment over time. Other than regular maintenance, an impression of cleanliness can be achieved through particular design features, such as finish materials on floors and walls, and particular fabrics on furniture.
- 2. Aroma. The smell of coffee and baked goods was important to participants. Few studies have investigated the role of smell in developing place attachment, but given the ability of certain smells to evoke affective memories, it is not surprising that smell should be relevant to place attachment. Designers could enhance or regulate this feature through ventilation systems.

- 3. Lighting. Coffee shops that engender attachment should provide adequate lighting. Because place attachment often involves the congruence between one's activities and the features of the place, lighting may be designed with typical coffee shop activities in mind, such as reading, socializing, or relaxing.
- 4. Comfortable seating. Some patrons expressed preferences for comfortable furniture, such as couches rather than wooden chairs. Although managers may wish to encourage the development of place attachment, seating that is too comfortable also encourages lingering for a longer period than is desired, inhibiting seating for others. Thus, designers must consider the preferences of the users alongside the business goals of the management.
- 5. Views. Like other types of spaces (e.g., residences, work places), coffee shops are preferred when they incorporate windows with views to the outside.

Of course, place attachment is not derived solely from physical features, as the meaning mediated model asserts, but it also strongly relates to social characteristics of the environment. At least six social features appear relevant to place attachment in coffee shops.

- 1. Opportunity to linger. As we know, place attachment usually takes time to develop, and so allowing people to linger may be one contributing social factor. Coffee shops that allow patrons to linger were also those with the highest rates of observed social interaction.
- 2. Control. Patrons emphasized the importance of having control over some aspects of the coffee shop, whether it was simply having a "usual" chair, or having a say in how the coffee shop should be run. Management can encourage this feature by asking patrons for feedback, and allowing them to alter the space if possible (e.g., ensuring that tables and chairs are movable.)
- 3. Trust and belonging. A public space such as a coffee shop is one in which feeling accepted and welcome are crucial. This generates a sense of belongingness in which feeling socially comfortable in a coffee shop can translate into feeling connected to the broader community. Managers can promote this experience by creating policies against discrimination of patrons,



FIGURE 9-16 Coffee shops can be designed with place attachment in mind.

promoting diversity among employees, and offering the venue to various community groups.

- **4. Activity support**. Recall that place dependence emerges when we become attached to places that support our ability to execute our desired activities. Coffee shops can offer such venues, such as for students who are studying, or community members who are holding formal or informal meetings. Thus, designers may investigate local patrons' desired activities and try to incorporate those activities into coffee shop design.
- 5. Social presence. Merely being around others can reduce loneliness and encourage attachment to the community, especially when those others are familiar. Coffee shops with regular customers appear to help meet this need. Remember "familiar strangers" from an earlier chapter?
- **6. Social support.** Patrons expressed the importance of the coffee shop as a venue for social support. Using the space to confide in and connect with others serves the individual's needs, and builds social capital in the community.

This list of physical and social features may serve as a starting point for designers. However, because the relations between these features and place attachment were not formally studied, this model remains preliminary, and would benefit from empirical validation.

#### **Place Attachment in Retirement Communities**

AN AGING POPULATION means that in some parts of the world, such as Canada, the US, Western Europe, and Japan, the number of people living in retirement communities is increasing. Despite the benefits of such communities, elderly persons' transition to living in a new place can be extremely difficult, especially if they are leaving a long-time residence, are recently widowed, or are experiencing physical and mental health challenges.

Two psychological factors important to adjustment and overall quality of life in the new community are place attachment and social support; the new place is beneficial when it offers a sense of belonging and comfort, as well as staff members and other residents who can provide emotional and tangible support beyond that supplied by the new resident's family.<sup>276</sup> Researchers have begun to identify which design features contribute to place attachment and social support in retirement communities.

A new continuing care retirement facility in the United States surveyed elderly residents who had lived there for 18 months.277 The researchers also collected a variety of information about the physical environment. Three design features significantly predicted place attachment: (1) a short walking distance between one's unit and the main activity center; (2) a high probability of encountering other residents near one's unit, defined as having neighbors on both sides, and having intersecting pedestrian paths near the front door; and (3) the presence of garden space.

The first two of these factors seem to increase place attachment through involvement in the residential community and increasing social interaction; both were also correlated with perceived social support. Gardening space, however, was not correlated with social support, so it may exert its influence on place attachment through other mechanisms, such as psychological restoration, control, or aesthetics. Of course, many other physical features, such as décor, can also contribute to (or detract from) the degree of attachment to retirement communities. How residential communities can manage to connect residents to their

past places is another question that research on place attachment with elderly residents can help us to answer.

AS THESE EXAMPLES SHOW, spaces can be designed with place attachment in mind, by incorporating physical features that are expected to directly increase place attachment, and by designing spaces that facilitate social interaction. Coffee shops and retirement communities are two examples of places that can benefit from place attachment-relevant design. More research is needed to test the causal impact of such design changes on place attachment strength.

#### PLACE IS A CENTRAL PART OF THE HUMAN EXPERIENCE,

because every life and all of our lives happen in physical settings. Some settings are particularly meaningful and central to our identities. The phenomenon of place attachment is multi-dimensional: they involve many place types, modes of generating meaning, and psychological processes. Certain places possess physical and social attributes that make them more likely candidates for attachment. Once that bond has formed, we often experience improved wellbeing although, like other relationships, place bonds can also have a shadow side. Research on place attachment has greatly increased in recent years, but the methodological approaches to studying it are still fairly limited; we will know more about the causal mechanisms of place attachment once we begin to study it using experimental designs.

#### Suggested Supplementary Readings

- Altman, I., & Low, S. M. (Eds.) (1992). Place attachment. New York: Plenum.
- Clayton, S., & Opotow, S. (Eds.). Identity and the natural environment: The psychological significance of nature. Cambridge, MA: MIT Press.
- Devine-Wright, P., & Howes, Y. (2010). Disruption to place attachment and the protection of restorative environments: A wind energy case study. Journal of Environmental Psychology, 30, 271-280.
- Fried, M. (1963). Grieving for a lost home. In L. J. Duhl (Ed.), The urban condition: People and policy in the metropolis (pp. 124-152). New York: Simon & Schuster.
- Giuliani, M. V. (2003). Theory of attachment and place attachment. In M. Bonnes, T. Lee, & M. Bonaiuto (Eds.), Psychological theories for environmental issues (pp.137-170). Aldershot: Ashgate.
- Lewicka, M. (2011). Place attachment: How far have we come in the last 40 years? Journal of Environmental Psychology, 31, 207-230.
- Manzo, L. C., & Devine-Wright, P. (Eds.) (2014). Place attachment: Advances in theory, methods, and applications. New York, NY: Routledge.
- Mazumdar, S., & Mazumdar, S. (2004). Religion and place attachment: A study of sacred places. Journal of Environmental Psychology, 24, 385-397.
- Morgan, P. (2010). Towards a developmental theory of place attachment. Journal of Environmental Psychology, 30, 11-22.
- Proshansky, H. M., Fabian, A. K., & Kaminoff, R. (1983). Place-identity: Physical world socialization of the self. Journal of Environmental Psychology, 3, 57-83.
- Scannell, L., & Gifford, R. (2010a). Defining place attachment: A tripartite organizing framework. Journal of Environmental Psychology, 30, 1-10.

#### References

- Relph, E. (1976). Place and placelessness. London: Pion Limited.
- Tuan, Y.-F. (1974). Topophilia: A study of environmental perception, attitudes, and values. Englewood Cliffs, N.J.: Prentice-Hall.
- Kasarda, J. D., & Janowitz, M. (1974). Community attachment in mass society. American Sociological Review, 39, 328–339.
- Scannell, L., & Gifford, R. (2010a). Defining place attachment: A tripartite organizing framework. Journal of Environmental Psychology, 30, 1-10.
- Billig, M. (2006). Is my home my castle? Place attachment, risk perception, and religious faith. Environment and Behavior, 38, 248-265.

- Mazumdar, S., & Mazumdar, S. (2004). Religion and place attachment: A study of sacred places. Journal of Environmental Psychology, *24*, 385-397.
- Hidalgo, M. C., & Hernández, B. (2001). Place attachment: Conceptual and empirical questions. Journal of Environmental Psychology, 21, 273-281.
- Giuliani, M. V. (2003). Theory of attachment and place attachment. In M. Bonnes, T. Lee, & M. Bonaiuto (Eds.), Psychological theories for environmental issues (pp. 137-170). Aldershot: Ashgate.
- Cuba, L., & Hummon, D. M. (1993). A place to call home: Identification with dwelling, community, and region. Sociological Quarterly, 34, 111-131.
- Mesch, G. S., & Manor, O. (1998). Social ties, environmental perception, and local attachment. Environment and Behavior, 30, 227-245.

- 11 Riley, R. B. (1992). Attachment to the ordinary landscape. In I. Altman, & S. M. Low (Eds.), Place attachment (pp. 13-35). New York: Plenum Press.
- 12 Manzo, L. C. (2003). Beyond house and haven: Toward a revisioning of emotional relationships with places. Journal of Environmental Psychology, 23, 47-61.
- Golledge, R. G., & Stimson, R. J. (1997). Spatial behavior: A geographic perspective. New York: Guilford.
- Cooper Marcus, C. (1992). Environmental memories. In I. Altman, & S. M. Low (Eds.), Place attachment (pp. 87-112). New York: Plenum.
- Twigger-Ross, C. L., & Uzzell, D. L. (1996). Place and identity processes. Journal of Environmental Psychology, 16, 205-220.
- 16 Mazumdar, S., & Mazumdar, S. (2004). Religion and place attachment: A study of sacred places. Journal of Environmental Psychology, *24*, 385-397.
- Smith, J. S., & White, B. N. (2004). Detached from their homeland: The Latter-Day Saints of Chihuahua, Mexico. Journal of Cultural Geography, 21, 57-76.
- 18 Francaviglia, R. V. (1978). Xenia rebuilds: Effects of pre-disaster conditioning on postdisaster redevelopment. Journal of the American Institute of Planners, 44, 13–24.
- 19 Altman, I., & Low, S. M. (Eds.) (1992). Place attachment. New York: Plenum.
- Stedman, R. C. (2002). Toward a social psychology of place. Environment and Behavior, 34, 561-581.
- <sup>21</sup> Proshansky, H. M. (1978). The city and self-identity. Environment and Behavior, 10, 147-169.
- 22 Proshansky, H. M., Fabian, A. K., & Kaminoff, R. (1983). Place-identity: Physical world socialization of the self. Journal of Environmental Psychology, 3, 5783.
- Twigger-Ross, C. L. & Uzzell, D. L. (1996). Place and identity processes. *Journal of Environmental Psychology*, 16, 205-220.
- Moore, R. L., & Graefe, A. R. (1994). Attachments to recreation settings. Leisure Sciences, 16, 17-31.
- Stokols, D., & Shumaker, S. A. (1981). People in places: A transactional view of settings. In J. Harvey (Ed.), Cognition, social behavior, and the environment (pp. 441-488). Hillsdale, NJ:
- <sup>26</sup> Billig, M., Kohn, R., & Levav, I. (2006). Anticipatory stress in the population facing forced removal from the Gaza strip. Journal of Nervous and Mental Disease, 194, 195-200.
- Bonaiuto, M., Fornara, F., & Bonnes, M. (2006). Perceived residential environment quality in middle- and low-extension Italian cities. European Review of Applied Psychology, 56, 23-34.
- Jorgensen, B. S., & Stedman, R. C. (2001). Sense of place as an attitude: Lakeshore owners' attitudes toward their properties. Journal of Environmental Psychology, 21, 233-248.
- Scopelliti, M., & Tiberio, L. in Homesickness university students: The role of multiple place ment. Environment and Behavior, 42, 335-350.

- 30 Twigger, C. (1992). Psychological attachment to place: London Docklands—a case study. Paper presented at the Annual British Psychological Society Conference, Scarborough, U.K, April 5–8.
- 31 Williams, D. R., & Roggenbuck, J. W. (1989, October). Measuring place attachment: Some preliminary results. Paper presented at the NRPA Symposium on Leisure Research, San Antonio, Texas
- 32 Giuliani, M. V. (2003). Theory of attachment and place attachment. In M. Bonnes, T. Lee, & M. Bonaiuto (Eds.), Psychological theories for environmental issues (pp. 137-170). Aldershot: Ashgate.
- <sup>33</sup> Jorgensen, B. S., & Stedman, R. C. (2001). Sense of place as an attitude: Lakeshore owners' attitudes toward their properties. *Journal of Environmental Psychology*, 21, 233-248.
- 34 Scannell, L., & Gifford, R. (2010a). Defining place attachment: A tripartite organizing framework. *Journal of Environmental Psychology*, 30, 1-10.
- 35 Dallago, L., Perkins, D. D., Santinello, M., Boyce, W., Molcho, M., & Morgan, A. (2009). Adolescent place attachment, social capital, and perceived safety: A comparison of 13 countries. American Journal of Community Psychology, 44, 148-160.
- <sup>36</sup> Fishwick, L., & Vining, J. (1992). Toward a phenomenology of recreation place. *Journal of Environmental Psychology*, 12, 57-63.
- 37 Mazumdar, S. (2005). Religious place attachment, squatting and "qualitative" research: A commentary. *Journal of Environmental Psychology*, 25, 87-95.
- 38 Morgan, P. (2010). Towards a developmental theory of place attachment. *Journal of Environmental Psychology*, 30, 11-22.
- 39 Gustafson, P. (2001). Roots and routes: Exploring the relationship between place attachment and mobility. *Environment and Behavior*, 33, 667-686.
- 40 Boğaç, C. (2009). Place attachment in a foreign settlement. *Journal of Environmental Psychology*, 29, 267–278.
- 41 Beckley, T., Stedman, R.C., Wallace, S., & Ambard, M. (2007). Snapshots of what matters most: Using resident employed photography to articulate attachment to place. Society & Natural Resources, 20, 913-29.
- 42 Stedman, R.C., Beckley, T., Wallace, S. & Ambard, M. (2004). A picture and 1000 words: Using resident-employed photography to understand attachment to high amenity places. *Journal of Leisure Research*, 36, 580-606.
- 43 Ryan, M. M., & Ogilvie, M. (2001). Examining the effects of environmental interchangability with overseas students: A cross cultural comparison. *Journal of Marketing and Logistics*, 13, 63-74.
- 44 Steel, G. D. (2000). Polar bonds: Environmental relationships in the polar regions. *Environment and Behavior*, 32, 796-816.
- 45 van der Klis, M., & Karsten, L. (2009). Commuting partners, dual residences, and the meaning of home. *Journal of Environmental Psychology*, 29, 235-245.
- 46 Brown, G. (2005). Mapping spatial attributes in survey research for natural resource management: Methods and applications. Society and Natural Resources, 18, 17-39.

- <sup>47</sup> Brown, G. & Raymond, C. (2007). The relationship between place attachment and landscape values: Toward mapping place attachment. *Applied Geography*, 27, 89–111
- 48 Scannell, L. (2013). The bases of bonding: Comparing the functions of place and interpersonal attachment. Unpublished Dissertation. University of Victoria
- 49 Mikulincer, M., Gillath, O., & Shaver, P. R. (2002). Activation of the attachment system in adulthood: Threat-related primes increase the accessibility of mental representations of attachment figures. *Journal of Personality and Social Psychology*, 83, 881-895.
- Tognoli, J. (2003). Leaving home: Homesickness, place attachment, and transition among residential college students. Journal of College Student Psychotherapy, 18, 35-48
- 51 Winkel, G., Saegert, S., & Evans, G. W. (2009). An ecological perspective on theory, methods, and analysis in environmental psychology: Advances and challenges. *Journal of Environmental Psychology*, 29, 318-328.
- Brown, B., Perkins, D. D., & Brown, G. (2003). Place attachment in a revitalizing neighborhood: Individual and block levels of analysis. *Journal of Environmental Psychology*, 23, 259-271.
- 53 Lewicka, M. (2011). Place attachment: How far have we come in the last 40 years? *Journal* of *Environmental Psychology*, 31, 207-230.
- 54 Twigger-Ross, C. L., & Uzzell, D. L. (1996). Place and identity processes. *Journal of Environmental Psychology*, 16, 205-220.
- 55 Hay, R. (1998). Sense of place in developmental context. *Journal of Environmental Psychology*, 18, 5-29.
- Hernández, B., Hidalgo, M. C., Salazar-Laplace, M. E., & Hess, S. (2007). Place attachment and place identity in natives and nonnatives. *Journal of Environmental Psychology*, 27, 310–319.
- 57 Twigger-Ross, C. L., & Uzzell, D. L. (1996). Place and identity processes. *Journal of Environmental Psychology*, 16, 205-220.
- 58 Knez, I. (2005). Attachment and identity as related to a place and its perceived climate. *Journal of Environmental Psychology*, 25, 207-218.
- 59 Feldman, R. M. (1990). Settlement-identity: Psychological bonds with home places in a mobile society. *Environment and Behavior*, 22, 183-229.
- 60 Fuhrer, U., Kaiser, F. G., & Hartig, T. (1993). Place attachment and mobility during leisure time. Journal of Environmental Psychology, 13, 309–321.
- 61 Marsh, B. (1987). Continuity and decline in the anthracite towns of Pennsylvania. Annals of the Association of American Geographers, 77, 337–352.
- 62 McHugh, K. E., & Mings, R. C. (1996). The circle of migration: Attachment to place in aging. *Annals of the Association of American Geographers*, 86, 530-550.
- 63 Cuba, L., & Hummon, D. M. (1993). A place to call home: Identification with dwelling, community, and region. *Sociological Quarterly*, 34, 111–131.
- 64 Gustafson, P. (2001). Roots and routes: Exploring the relationship between place

- attachment and mobility. Environment and Behavior, 33, 667-686.
- 65 Barcus, H. R., & Brunn, S. D. (2010). Place elasticity: Exploring a new conceptualization of mobility and place attachment in rural America. Geografiska Annaler: Series B, Human Geography, 92, 281-295.
- 66 Giuliani, M. V., Ferrara, F., & Barabotti, S. (2003). One attachment or more?. In G. Moser, E. Pol, Y. Bernard, M. Bonnes, J. Corraliza, & M.V. Giuliani (Eds.), People, Places, and Sustainability: 21st Century Metropolis (pp. 111-122). Göttingen, Germany: Hogrefe & Huber.
- 67 Gustafson, P. (2009). Mobility and territorial belonging. Environment and Behavior, 41, 490-508.
- 68 Gustafson, P. (2001). Roots and routes: Exploring the relationship between place attachment and mobility. *Environment and Behavior*, 33, 667-686.
- 69 Tognoli, J. (2003). Leaving home: Homesickness, place attachment, and transition among residential college students. Journal of College Student Psychotherapy, 18, 35-48.
- <sup>70</sup> Case, D. (1996). Contributions of journeys away to the definition of home: An empirical study of a dialectical process. *Journal of Environmental Psychology*, 16, 1-15.
- 71 Bolan, M. (1997). The mobility experience and neighborhood attachment. *Demography*, 34, 225-237.
- Parown, B., Perkins, D. D., & Brown, G. (2003). Place attachment in a revitalizing neighborhood: Individual and block levels of analysis. *Journal of Environmental Psychology*, 23, 259-271.
- 73 Mesch, G. S., & Manor, O. (1998). Social ties, environmental perception, and local attachment. *Environment and Behavior*, 30, 227-245.
- 74 Manzo, L. C. (2014). Exploring the shadow side: Place attachment in the context of stigma, displacement, and social housing. In L. C. Manzo & P. Devine-Wright (Eds.), Place attachment: Advances in theory, methods, and applications. (pp. 165-176). New York, NY: Routledge.
- 75 Spencer, C. & Woolley, H. (2000). Children and the city: A summary of recent environmental psychology research. *Child: Care, Health and Development*, 26, 181-198.
- 76 Riger, S., & Lavrakas, P. J. (1981). Community ties: Patterns of attachment and social interaction in urban neighborhoods. *American Journal* of Community Psychology, 9, 55-66.
- 77 Lewicka, M. (2013). Localism and activity as two dimensions of people-place bonding: The role of cultural capital. *Journal of Environmental Psychology*, 36, 43-53.
- 78 Hummon, D. M. (1992). Community attachment: Local sentiment and sense of place. In I. Altman & S. Low (Eds), *Place Attachment*, New York: Plenum.
- 79 Lewicka, M. (2011). Place attachment: How far have we come in the last 40 years? *Journal* of Environmental Psychology, 31, 207-230.
- 80 Lewicka, M. (2005). Ways to make people active: Role of place attachment, cultural capital and neighborhood ties. *Journal of Environmental Psychology*, 4, 381–395.
- 81 Ahrentzen, S. B. (1992). Home as a workplace in the lives of women. In I. Altman, & S. M.

- Low (Eds.), Place attachment (pp. 113-138). New York: Plenum.
- 82 Hidalgo, M. C., & Hernández, B. (2001). Place attachment: Conceptual and empirical questions. Journal of Environmental Psychology, *21*, 273-281.
- 83 Pretty, G. H., Chipuer, H., & Bramston, P. (2003). Sense of place amongst adolescents and adults in two rural Australian towns: the discriminating features of place attachment, sense of community and place dependence in relation to place identity. Journal of Environmental Psychology, 23, 273-287.
- Spencer, C., & Woolley, H. (2000). Children and the city: A summary of recent environmental psychology research. Child: Care, Health and Development, 26, 181-198.
- 85 Morgan, P. (2010). Towards a developmental theory of place attachment. Journal of Environmental Psychology, 30, 11-22.
- 86 Korpela, K. M., Kytta, M., & Hartig, T. (2002). Children's favorite places: Restorative experience, self-regulation and children's place preferences. Journal of Environmental Psychology, 22, 387-398.
- Korpela, K. (2002). Children's environment. In R. B. Bechtel, & A. Churchman (Eds.) Handbook environmental psychology. New John Wiley & Sons, 363-373.
- Malinowski, J. C., & Thurber, C. A. (1996). Developmental shifts in the place preferences of boys aged 8-16 years. *Journal of Environmental* Psychology, 16, 45-54.
- Thurber, C. A., & Malinowski, J. C. (1999). Environmental correlates of negative emotions in children. Environment & Behavior, 31, 487-513.
- Elder, G. H., King, V., & Conger, R. D. (1996). Attachment to place and migration prospects: developmental perspective. Journal of Research on Adolescence, 6, 397-425.
- 91 Hay, R. (1998). Sense of place in developmental context. Journal of Environmental Psychology, 18,
- Frieze, I. H., Hansen, S. B., & Boneva, B. (2006). The migrant personality and college students' plans for geographic mobility. Journal of Environmental Psychology, 26, 170-177.
- 93 Riger, S., & Lavrakas, P. J. (1981). Community ties: Patterns of attachment and social interaction in urban neighborhoods. American Journal of Community Psychology, 9, 55-66.
- Sugihara, S., & Evans, G. W. (2000). Place attachment and social support at continuing care retirement communities. Environment & Behavior, 32,
- 95 Twigger-Ross, C. L., & Uzzell, D. L. (1996). Place and identity processes. Journal of Environmental Psychology, 16, 205-220.
- Oswald, R., & Lazarevic, V. (2011). You live *where*?! Lesbian mothers' attachment to nonmetropolitan communities. Family Relations, 60, 373-386.
- 97 Manzo, L. C. (2005). For better or worse: Exploring multiple dimensions of place mean-Journal of Environmental Psychology, 25,
- Forest, B. (1995). West Hollywood as symbol: The significance of place in the construction of a gay identity. Environment and Planning D: Society and Space, 13, 133-157.

- Tartaglia, S. (2006). A preliminary study for a new model of sense of community. Journal of Community Psychology, 34, 25-36.
- 100 Thurber, C. A., & Sigman, M. D. (1998). Preliminary models of risk and protective factors for childhood homesickness: Review and empirical synthesis. Child Development, 69, 903-934.
- 101 Fried, M., & Gleicher, P. (1961). Some sources of residential satisfaction in an urban slum. Journal of the American Institute of Planners, 27, 305-315.
- 102 Taylor, R. B. (1982). Neighborhood physical environment and stress. In G. W. Evans (Ed.), Environmental stress. New York: Cambridge
- 103 Woldoff, R. A. (2002). The effects of local stressors on neighborhood attachment. Social Forces, 81, 87-116.
- 104 Bonaiuto, M., Aiello, A., Perugini, M., Bonnes, M., & Ercolani, A. P. (1999). Multidimensional perception of residential environment quality and neighborhood attachment in the urban environment. Journal of Environmental Psychology, 19, 331-352.
- <sup>105</sup> Fried, M. (1963). Grieving for a lost home. In L. J. Duhl (Ed.), The urban condition: People and policy in the metropolis (pp. 124-152). New York: Simon & Schuster.
- 106 Hidalgo, M. C., & Hernández, B. (2001). Place attachment: Conceptual and empirical questions. Journal of Environmental Psychology,
- 107 Mesch, G. S., & Manor, O. (1998). Social ties, environmental perception, and local attachment. Environment and Behavior, 30, 227-245.
- 108 Chow, K., & Healey, M. (2008). Place attachment and place identity: First-year undergraduates making the transition from home to university, Journal of Environmental Psychology, 28, 362-372.
- <sup>109</sup> Kasarda, J. D., & Janowitz, M. (1974). Community attachment in mass American Sociological Review, 39, 328–339.
- 110 Chow, K., & Healey, M. (2008). Place attachment and place identity: First-year undergraduates making the transition from home to university, Journal of Environmental Psychology, 28, 362-372.
- 111 Woldoff, R. A. (2002). The effects of local stressors on neighborhood attachment. Social Forces,
- 112 Perkins, D. D. & Long, D. A. (2002). Neighborhood sense of community and social multi-level analysis. In A Fisher, C. Sonn, & B. Bishop (Eds.), Psychological sense of community: Research, applications, and implications (pp. 291-318). New York: Plenum.
- 113 Pretty, G. H., Chipuer, H., & Bramston, P. (2003). Sense of place amongst adolescents and adults in two rural Australian towns: the discriminating features of place attachment, sense of community and place dependence in relation to place identity. Journal of Environmental Psychology, 23, 273-287.
- 114 Kasarda, J. D., & Janowitz, M. (1974). American Sociological Review, 39, 328–339.
- 115 Robison, L., Schmid, A., & Siles, M. (2002). Is social capital really capital? Review of Social Economy, 60, 1-21.

- 116 Pretty, J., & Ward, H. (2001). Social capital and the environment. World Development, 29, 2.09 - 2.27
- $^{117}$  Murphy, B. L. (2007). Locating social capital in resilient community-level emergency management, Natural Hazards, 41, 297-315.
- 118 Woldoff, R. A. (2002). The effects of local stressors on neighborhood attachment. Social Forces, 81, 87-116.
- 119 Twigger, C. (1992). Psychological attachment to place: London Docklands-a case study. Paper presented at the Annual British Psychological Society Conference, Scarborough, U.K, April
- 120 Gifford, R., Lacombe, C., Kormos, C., & Scannell, L. (2008). Families living downtown: Challenges and benefits. Report for the Canada Mortgage and Housing Corporation.
- 121 Sonn, C. C. (2002). Immigrant adaptation. In A. T. Fisher, C. C. Sonn & B. J. Bishop (Eds.), Psychological sense of community: Research, applications, and implications (pp. 205-222). New York: Kluwer Academic/Plenum Publishers.
- 122 Manzo, L. C., Kleit, R. G., & Couch, D. (2008). Moving once is like having your house on fire three times: The experience of place and displacement among residents of a public housing site. Urban Studies, 45, 1855-1878.
- 123 Aguilar, M. A. (2002). Identity and daily space in two municipalities in Mexico City. Environment and Behavior, 34, 111-121.
- 124 Sime, J. D., & Kimura, M. (1988). Home gardens: Attachment to the natural environment and the experience of time from a Western and Japanese perspective. Nineteenth Annual Conference of the Environmental Design Research Association, Pomona, California
- 125 Catrill, J. G. (1998). The environmental self and a sense of place: Communication foundations for regional ecosystem management. Journal of Applied Communication Research, 26, 301-318
- 126 Hunter, L. M. (1998). The association between environmental risk and internal migration flows. Population and Environment: A Journal of Interdisciplinary Studies, 19, 247-277.
- 127 Riger, S., & Lavrakas, P. J. (1981). Community ties: Patterns of attachment and social interaction in urban neighborhoods. American Journal of Community Psychology, 9, 55-66.
- 128 Fried, M. (1982). Residential attachment: Sources of residential and community satisfaction. Journal of Social Issues, 38, 107-120.
- 129 Lewicka, M. (2010). What makes neighbourhood different from home and city? Effects of place scale on place attachment. Journal of Environmental Psychology, 30, 35–51.
- 130 Brown, B. B., & Werner, C. M. (1985). Social cohesiveness, territoriality, and holiday decorations: The influence of cul-de-sacs. Environment and Behavior, 17, 539-565.
- 131 Pinet, C. (1988). A "sense of belonging" in the neighborhood: The effect of traffic on space appropriation. Nineteenth Annual Conference of the Environmental Design Research Association, Pomona, California.
- 132 Uzzell, D., Pol, E., & Badenas, D. (2002). Place identification, social cohesion, and environmental sustainability. Environment and Behavior, 34, 26-53.

- 133 Pendola, R. & Gen, S. (2008). Does "Main Street" promote sense of community? A comparison of San Francisco neighborhoods. *Environment and Behavior*, 40, 545-574.
- 134 Kim, J., & Kaplan, R. (2004). Physical and psychological factors in sense of community: New urbanist Kentlands and nearby Orchard Village. Environment and Behavior, 36, 313-340.
- 135 Lewicka, M. (2005). Ways to make people active: Role of place attachment, cultural capital and neighborhood ties. *Journal of Environmental Psychology*, 4, 381–395.
- <sup>136</sup> Wilson, G., & Baldassare, M. (1996). Overall "Sense of Community" in a suburban region: The effects of localism, privacy, and urbanization. *Environment and Behavior*, 28, 27-43.
- 137 Theodori, G. L., & Luloff, A. E. (2000). Urbanization and community attachment in rural areas. Society and Natural Resources, 13, 399-420
- 138 Kasarda, J. D., & Janowitz, M. (1974). Community attachment in mass society. American Sociological Review, 39, 328–339.
- 139 Lewicka, M. (2011). Place attachment: How far have we come in the last 40 years? *Journal* of Environmental Psychology, 31, 207-230.
- 140 Hidalgo, M. C., & Hernández, B. (2001). Place attachment: Conceptual and empirical questions. *Journal of Environmental Psychology*, 21, 273-281.
- 141 Hernandez, B., Hidalgo, M. C., Salazar-Laplace, M. E., & Hess, S. (2007). Place attachment and place identity in natives and nonnatives. *Journal of Environmental Psychology*, 27, 310–319.
- 142 Lewicka, M. (2008). Place attachment, place identity and place memory: Restoring the forgotten city past. *Journal of Environmental Psychology*, 28, 209-231.
- 143 Laczko, L. S. (2005). National and local attachments in a changing world system: Evidence from an international survey. *International Review of Sociology*, 15, 517–528.
- 144 Feldman, R. M. (1996). Constancy and change in attachments to types of settlements. *Environment and Behavior*, 28, 419-445.
- 145 Knez, I. (2005). Attachment and identity as related to a place and its perceived climate. Journal of Environmental Psychology, 25, 207-218.
- 146 Ryan, M. M., & Ogilvie, M. (2001). Examining the effects of environmental interchangability with overseas students: A cross cultural comparison. *Journal of Marketing and Logistics*, 13, 63-74.
- 147 Low, S. M. (1992). Symbolic ties that bind. Place attachment in the plaza. In I. Altman, & S. M. Low (Eds.), *Place attachment* (pp. 165-185). New York and London: Plenum Press.
- 148 Low, S. M. (1990). Cross-cultural place attachment: A preliminary typology. In Y. Yoshitake, R. B. Bechtel, T. Takahashi, & Asai, M. (Eds.), Current issues in environment-behavior research. Tokyo: University of Tokyo.
- 149 Austin, M. E., & Kaplan, R. (2003). Identity, involvement, and expertise in the inner city: Some benefits of tree-planting projects. In S. Clayton & S. Opotow (Eds.), Identity and the natural environment: The psychological significance of nature (pp. 205-225). Cambridge, MA: MIT Press.

- 150 Mazumdar, S., & Mazumdar, S. (2004). Religion and place attachment: A study of sacred places. Journal of Environmental Psychology, 24, 385-397.
- 151 Lutwack, L. (1984). The role of place in literature. Syracuse, NY: Syracuse University Press.
- 152 Lewicka, M. (2011). Place attachment: How far have we come in the last 40 years? *Journal* of Environmental Psychology, 31, 207-230.
- 153 Relph, E. (1976). Place and placelessness. London: Pion Limited.
- 154 Proshansky, H. M. (1978). The city and self-identity. Environment and Behavior, 10, 147-169.
- 155 Proshansky, H. M., Fabian, A. K., & Kaminoff, R. (1983). Place-identity. *Journal of Environmental Psychology*, 3, 57-83.
- 156 Billig, M. (2006). Is my home my castle? Place attachment, risk perception, and religious faith. Environment and Behavior, 38, 248-265.
- 157 Lalli, M. (1992). Urban-related identity: Theory, measurement and empirical findings. *Journal of Environmental Psychology*, 12, 285-303.
- 158 Feldman, R. M. (1990). Settlement-identity: Psychological bonds with home places in a mobile society. *Environment and Behavior*, 22, 183-229.
- 159 Brown, B., Perkins, D. D., & Brown, G. (2003). Place attachment in a revitalizing neighborhood: Individual and block levels of analysis. *Journal of Environmental Psychology*, 23, 259-271.
- 160 Stedman, R. (2003). Is it really just a social construction? The contribution of the physical environment to sense of place. Society and Natural Resources, 16, 671-685.
- 161 Kaltenborn, B. P., & Bjerke, T. (2002). Associations between landscape preferences and place attachment: A study in Røros, southern Norway. *Landscape Research*, 27, 381-396.
- 162 Bonaiuto, M., Breakwell, G. M., & Cano, I. (1996). Identity processes and environmental threat: The effects of nationalism and local identity upon perception of beach pollution. Journal of Community & Applied Social Psychology, 6, 157-175.
- 163 Tajfel, H. (1978). Differentiation between social groups. Academic Press, London.
- 164 Bonaiuto, M., Breakwell, G. M., & Cano, I. (1996). Identity processes and environmental threat: The effects of nationalism and local identity upon perception of beach pollution. Journal of Community & Applied Social Psychology, 6, 157-175.
- 165 Proshansky, H. M. (1978). The city and self-identity. Environment and Behavior, 10, 147-169.
- 166 Proshansky, H. M., Fabian, A. K., & Kaminoff, R. (1983). Place-identity. Journal of Environmental Psychology, 3, 57-83.
- 167 Mesch, G. S., & Manor, O. (1998). Social ties, environmental perception, and local attachment. *Environment and Behavior*, 30, 227-245.
- 168 Uzzell, D., Pol, E., & Badenas, D. (2002). Place identification, social cohesion, and environmental sustainability. *Environment and Behavior*, 34, 26-53.
- 169 Saegert, S. (1989). Unlikely leaders, extreme circumstances: Older black women building community households. American Journal of Community Psychology, 17, 295-316.

- <sup>170</sup> Brown, B. B., & Perkins, D. D. (1992). Disruptions in place attachment. In I. Altman & S. Low (Eds.), *Place attachment* (pp. 279-304). New York: Plenum.
- 171 Worchel, S. &, Lollis, M. (1982). Reactions to territorial contamination as a function of culture. Personality and Social Psychology Bulletin, 8, 370–375.
- Stedman, R. (2002). Toward a social psychology of place. Environment and Behavior 34, 561
   581.
- 173 Nordenstam, B. J. (1994, March). When communities say NIMBY to their LULUS: Factors influencing environmental and social impact perception. Paper presented at the 14th Annual Meeting of the International Association for Impact Assessment, Quebec, Canada.
- 174 Vorkinn, M., & Riese, H. (2001). Environmental concern in a local context: The significance of place attachment. *Environment* & Behavior, 33, 249-263.
- <sup>175</sup> Vaske, J. J., & Kobrin, K. C. (2001). Place attachment and environmentally responsible behavior. *Journal of Environmental Education*, 32, 16-21.
- 176 Uzzell, D., Pol, E., & Badenas, D. (2002). Place identification, social cohesion, and environmental sustainability. *Environment and Behavior*, 34, 26-53.
- 177 Scannell, L., & Gifford, R. (2010b). The relations between natural and civic place attachment and pro-environmental behavior. *Journal of Environmental Psychology*, 30, 289-297.
- 178 Clayton, S., & Opotow, S. (2003). Introduction: Identity and the natural environment. In S. Clayton, & S. Opotow (Eds.), Identity and the natural environment: The psychological significance of nature (pp. 1-11). Cambridge, MA: MIT Press.
- 179 Brown, B. B., Altman, I., & Werner, C. M. (2012). Place attachment. In S. J. Smith (Ed.), *The international encyclopedia of housing and home* (pp. 83-188). Oxford, UK: Elsevier.
- 180 Devine-Wright, P. and Howes, Y. (2010). Disruption to place attachment and the protection of restorative environments: A wind energy case study. *Journal of Environmental Psychology*, 30, 271-280.
- 181 Edelstein, M. R. (1988). Contaminated communities: The social and psychological impacts of residential toxic exposure. Boulder, CO: Westview.
- 182 Kyle, G. T., Graefe, A., Manning, R. E., & Bacon, J. (2004). Effect of involvement and place attachment on recreationists' perceptions of setting density. *Journal of Leisure Research*, 36, 209-231.
- 183 Vorkinn, M., & Riese, H. (2001). Environmental concern in a local context: The significance of place attachment. *Environment & Behavior*, 33, 249-263.
- <sup>184</sup> Kyle, G. T., Graefe, A., Manning, R. E., & Bacon, J. (2004). Effect of involvement and place attachment on recreationists' perceptions of setting density. *Journal of Leisure Research*, 36, 209-231.
- <sup>185</sup> Norris-Baker, C., & Scheidt, R. J. (1990). Place attachment among older residents of a "ghost town": A transactional approach. Proceedings of the 21st annual conference of the Environmental Design Research Association, 21, 333-340.
- 186 Kaplan, R. (1985). Nature at the doorstep: Residential satisfaction and the

- nearby environment. Journal of Architecture and Planning Research, 2, 115-127.
- <sup>187</sup> Fried, M. (1963). Grieving for a lost home. In L. J. Duhl (Ed.), *The urban condition: People* and policy in the metropolis (pp. 124-152). New York: Simon & Schuster.
- 188 West, R. A. (2003). Place psychological experience: A Native American perspective. ProQuest Information & Learning.
- 189 Windsor, J. E. & McVey, J. A. (2005). Annihilation of both place and sense of place: The experience of the Cheslatta T'En Canadian First Nation within the context of large-scale environmental projects. Geographical Journal, 171, 146-65.
- <sup>190</sup> Windsor, J. E. & McVey, J. A. (2005). Annihilation of both place and sense of place: The experience of the Cheslatta T'En Canadian First Nation within the context of large-scale environmental projects. Geographical Journal, 171, 146-65.
- 191 Fisher, W. F. (1999). Going under: Indigenous peoples and the struggle against large dams. Cultural Survival Quarterly, 23, 29-32.
- 192 McAndrew, F. T. (1998). The measurement of "rootedness" and the prediction of attachment to home-towns in college students. Journal of Environmental Psychology, 18, 409-471.
- 193 Hornsey, M., & Gallois, C. (1998). The impact of interpersonal and intergroup communication accommodation on perceptions of Chinese students in Australia. Journal of Language and Social Psychology, 17, 323-347
- 194 Chow, K., & Healey, M. (2008). Place attachment and place identity: First-year undergraduates making the transition from home to university, Journal of Environmental Psychology, 28, 362-372.
- 195 Ryan, M. M., & Ogilvie, M. (2001). Examining the effects of environmental interchangability with overseas students: A cross cultural comparison. Journal of Marketing and Logistics, 13, 63-74.
- 196 Mishra, S., Mazumdar, S., & Suar D. (2010). Place attachment and flood preparedness. Journal of Environmental Psychology, 30, 187-197.
- 197 Cuba, L., & Hummon, D. M. (1993). A place to call home: Identification with dwelling, community, and region. Sociological Quarterly, 34, 111-131.
- <sup>198</sup> Riley, R. B. (1992). Attachment to the ordinary landscape. In I. Altman, & S. M. Low (Eds.), Place attachment (pp. 13-35). New York:
- 199 Fullilove, M. T. (1996). Psychiatric implications of displacement: Contributions from the psychology of place. American Journal of Psychiatry, 153, 1516-1523
- 200 Giuliani, M. V. (2003). Theory of attachment and place attachment. In M. Bonnes, T. Lee, & M. Bonaiuto (Eds.), Psychological theories for environmental issues (pp. 137-170). Aldershot: Ashgate.
- <sup>201</sup> Hidalgo, M. C., & Hernández, B. (2001). Place attachment: Conceptual and empirical questions. Journal of Environmental Psychology, *21*, 273-281.
- <sup>202</sup> Mesch, G. S., & Manor, O. (1998). Social ties, environmental perception, and local attachment. Environment and Behavior, 30, 227-245.
- <sup>203</sup> Giuliani, M. V. (2003). Theory of attachment and place attachment. In M. Bonnes, T. Lee, & M.

- Bonaiuto (Eds.), Psychological theories for environmental issues (pp. 137-170). Aldershot: Ashgate.
- <sup>204</sup> Billig, M., Kohn, R., & Levav, I. (2006). Anticipatory stress in the population facing forced removal from the Gaza strip. Journal of Nervous and Mental Disease, 194, 195-200.
- 205 Cooper Marcus, C. (1992). Environmental memories. In I. Altman, & S. M. Low (Eds.), Place attachment (pp. 87-112). New York: Plenum.
- <sup>206</sup> Twigger-Ross, C. L., & Uzzell, D. L. (1996). Place and identity processes. Journal of Environmental Psychology, 16, 205-220.
- 207 Low, S. M., & Altman, I. (1992). Place attachment: A conceptual inquiry. In I. Altman, & S. M. Low (Eds.), Place attachment (pp. 1-12). New York: Plenum.
- <sup>208</sup> Baumeiser, R. F., & Leary, M. R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. Psychological Bulletin, 117, 497- 529.
- <sup>209</sup> Pittman, T. S., & Zeigler, K. R. (2007). Basic human needs. In A. W. Kruglanski & E. T. Higgins (Eds.), Social psychology: Handbook of basic principles, 2<sup>nd</sup> ed. (pp. 473-489). New York:
- <sup>210</sup> Korpela, K. M., Kytta M., & Hartig, T. (2002). Children's favorite places: Restorative experience, self-regulation and children's place prefer-Environmental ences. Journal of Psychology, 22, 387-398.
- <sup>211</sup> Hartig, T., Kaiser, F. G., & Bowler, P. A. (2001). Psychological restoration in nature as positive motivation for ecological behavior. Environment and Behavior, 33, 590-607.
- <sup>212</sup> Cuba, L., & Hummon, D. M. (1993). A place to call home: Identification with dwelling, community, and region. Sociological Quarterly,
- <sup>213</sup> Fullilove, M. T. (1996). Psychiatric implications of displacement: Contributions from the psychology of place. American Journal of Psychiatry, 153, 1516-1523
- <sup>214</sup> Giuliani, M. V. (2003). Theory of attachment and place attachment. In M. Bonnes, T. Lee, & M. Bonaiuto (Eds.), Psychological theories for environmental issues (pp. 137-170). Aldershot: Ashgate.
- <sup>215</sup> Hidalgo, M. C., & Hernández, B. (2001). Place attachment: Conceptual and empirical questions. Journal of Environmental Psychology, 21, 273-281.
- <sup>216</sup> Mesch, G. S., & Manor, O. (1998). Social ties, environmental perception, and local attachment. Environment and Beĥavior, 30, 227-245.
- <sup>217</sup> Riley, R. B. (1992). Attachment to the ordinary landscape. In I. Altman, & S. M. Low (Eds.), Place attachment (pp. 13-35). New York: Plenum Press.
- <sup>218</sup> Moore, R. L., & Graefe, A. R. (1994). Attachments to recreation settings. Leisure Sciences, 16, 17-31.
- <sup>219</sup> Stokols, D., & Shumaker, S. A. (1981). People in places: A transactional view of settings. In J. Harvey (Ed.), Cognition, social behavior, and the environment (pp. 441-488). Hillsdale, NJ: Erlbaum
- <sup>220</sup> Charles, K. E. (2003). Fanger's thermal comfort and draught models (NRC/IRC Client Report B3205.XX). Ottawa, ON: National Research Council of Canada, Institute for Research in Construction.

- <sup>221</sup> Roulet, C.-A.; Johner, N.; Foradini, F.; Bluyssen, P.; Cox, C.; Fernandes, E.; Muller, B.; Aizlewood, C. 2006. Perceived health and comfort in relation to energy use and building characteristics. Building Research & Information, 34 (5), 467-474.
- <sup>222</sup> Knez, I. (2005). Attachment and identity as related to a place and its perceived climate. Journal of Environmental Psychology, 25, 207-218.
- <sup>223</sup> Wohlwill, J. F. (1966). The physical environment: A problem for a psychology of stimulation. Journal of Social Issues, 22, 29-38.
- <sup>224</sup> Ulrich, R. S. (1993). Biophilia, biophobia, and natural landscapes. In S. R. Kellert & E. O. Wilson (Eds.), *The biophilia hypothesis* (pp. 73-137). Washington, D.C.: Island Press.
- <sup>225</sup> Kaplan, S. (1995). The restorative benefits of nature: Toward an integrative framework. Journal of Environmental Psychology, 15, 169-182.
- <sup>226</sup> Taylor, A. F., Kuo, F. E., & Sullivan, W. C. (2001). Coping with ADD - the surprising connection to green play settings. Environment and Behavior, *33*, 54-77.
- <sup>227</sup> Ng, S. H., Kam, P. K., & Pong, R. W. M. (2005). People living in ageing buildings: Their quality of life and sense of belonging. *Journal of Environmental Psychology*, 25, 347-360.
- <sup>228</sup> Field, A., Witten, K., Robinson, E., Pledger, M. (2004). Who gets to what? Access to community resources in two New Zealand cities. Urban Policy and Research, 22. 189-205.
- <sup>229</sup> Brown, B. B., & Werner, C. M. (1985). Social cohesiveness, territoriality, and holiday decorations: The influence of cul-de-sacs. Environment and Behavior, 17, 539-565.
- <sup>230</sup> Dutton, D. (2003). Aesthetics and evolutionary psychology. In J. Levison (Ed.), The Oxford handbook for aesthetics. New York: Oxford University Press.
- <sup>231</sup> Hwang, S. N., Lee, C., & Chen, H. J. (2005). The Relationship among tourists' involvement, place attachment and interpretation satisfaction in Taiwan's national parks. Tourism Management, *26*, 143–156.
- <sup>232</sup> Manzo, L. C. (2003). Beyond house and haven: Toward a revisioning of emotional relationships with places. Journal of Environmental Psychology, 23, 47-61.
- <sup>233</sup> Chawla, L. (1992). Childhood place attachments. Human Behavior & Environment: Advances in Theory & Research, 12,
- <sup>234</sup> Manzo, L. C. (2014). Exploring the shadow side: Place attachment in the context of stigma, displacement, and social housing. In L. C. Manzo & P. Devine-Wright (Eds.), *Place attachment:* Advances in theory, methods, and applications. (pp. 165-176). New York, NY: Routledge.
- <sup>235</sup> Windsor, J. E. & McVey, J. A. (2005). Annihilation of both place and sense of place: The experience of the Cheslatta T'En Canadian First Nation within the context of large-scale environmental projects. Geographical Journal, 171, 146-65.
- <sup>236</sup> Rubinstein, R. L., & Parmelee, P. A. (1992). Attachment to place and the representation of the life course by the elderly. In I. Altman, & S. M. Low (Eds.), Place attachment (pp. 139-163). New York: Plenum.

- 237 Fried, M. (2000). Continuities and discontinuities of place. *Journal of Environmental Psychology*, 20, 193-205.
- 238 Sahdra, B., Shaver, P., & Brown, K. (2010). A scale to measure non-attachment: A Buddhist complement to western research on attachment and adaptive functioning. *Journal of Personality Assessment*, 92, 116-127.
- 239 Hay, R. (1998). Sense of place in developmental context. *Journal of Environmental Psychology*, 18, 5-29.
- 240 Fried, M. (2000). Continuities and discontinuities of place. *Journal of Environmental Psychology*, 20, 193-205.
- 241 Morgan, P. (2010). Towards a developmental theory of place attachment. *Journal of Environmental Psychology*, 30, 11-22.
- <sup>242</sup> Twigger-Ross, C. L., & Uzzell, D. L. (1996). Place and identity processes. *Journal of Environmental Psychology*, 16, 205-220.
- 243 Bowlby, J. (1969). Attachment and loss: Vol. 1. Attachment. New York: Basic Books.
- <sup>244</sup> Bowlby, J. (1982). Attachment and loss: Vol. 1. Attachment (2nd ed.). New York: Basic Books.
- <sup>245</sup> Ainsworth, M. D. S. (1967). *Infancy in Uganda: Infant care and the growth of love*. Baltimore: Johns Hopkins University Press.
- 246 Giuliani, M. V. (2003). Theory of attachment and place attachment. In M. Bonnes, T. Lee, & M. Bonaiuto (Eds.), Psychological theories for environmental issues (pp. 137-170). Aldershot: Ashgate.
- 247 Scannell, L., & Gifford, R. (2014). Comparing the theories of interpersonal and place a ttachment. In L. C. Manzo & P. Devine-Wright (Eds.), Place attachment: Advances in theory, methods, and applications (pp. 23-36). New York, NY: Routledge.
- 248 Kelly, G., & Hosking, K. (2008). Nonpermanent residents, place attachment, and "sea change" communities. *Environment and Behavior*, 40, 575-594.
- <sup>249</sup> Brown, B.B., & Perkins, D.D. (1992). Disruptions in place attachment. In I. Altman & S. Low (Eds.), *Place attachment* (pp. 279-304). New York: Plenum.
- 250 Harris, P. B., Brown, B. B., & Werner, C. M. (1996). Privacy regulation and place attachment: Predicting attachments to a student family housing facility. *Journal of Environmental Psychology*, 16, 287–301.
- 251 Fried, M. (2000). Continuities and discontinuities of place. *Journal of Environmental Psychology*, 20, 193-205.
- 252 Korpela, K. M., Kytta M., & Hartig, T. (2002). Children's favorite places: Restorative experience, self-regulation and children's place preferences. *Journal of Environmental Psychology*, 22, 387-398.
- 253 Shumaker, S. A., & Taylor, R. B. (1983). Toward a clarification of people-place relationships: A model of attachment to place. In N. R. Feimer, & E. S. Geller (Eds.), Environmental psychology: Directions and perspectives (pp. 219-256). New York: Praeger.
- <sup>254</sup> Dupuis, A., & Thorns, D. C. (1996). Meanings of home for older homeowners. *Housing Studies*, 11, 485-501.
- 255 Saunders, P. (1990). A nation of homeowners. London: Unwin Hyman.

- <sup>256</sup> Sixsmith, J. (1986). The meaning of home: An exploratory study of environmental experience. *Journal of Environmental Psychology*, 6, 281-298.
- <sup>257</sup> Fried, M. (1963). Grieving for a lost home. In L. J. Duhl (Ed.), *The urban condition: People and policy in the metropolis* (pp. 124-152). New York: Simon & Schuster.
- 258 Fullilove, M. T. (1996). Psychiatric implications of displacement: Contributions from the psychology of place. American Journal of Psychiatry, 153, 1516-1523
- 259 Windsor, J. E. & McVey, J. A. (2005). Annihilation of both place and sense of place: The experience of the Cheslatta T'En Canadian First Nation within the context of large-scale environmental projects. Geographical Journal, 171, 146–65.
- <sup>260</sup> Ainsworth, M. D. S. (1967). Infancy in Uganda: Infant care and the growth of love. Baltimore: Johns Hopkins University Press.
- 261 Ainsworth. M. D. S., Blehar, M., Waters, E., & Wall, S. (1978). Patterns of attachment: A psychological study of the strange situation. Hillsdale, NJ: Erlbaum.
- 262 Bartholomew, K., & Horowitz, L. M. (1991). Attachment styles among young adults: A test of a four-category model. *Journal of Personality and Social Psychology*, 61, 226-244.
- 263 Main, M., & Solomon, J. (1990). Procedures for identifying infants as disorganized/ disoriented during the Ainsworth Strange Situation. In Greenberg, M. T., Cicchetti, D., & Cummings, M. (Eds.), Attachment in the preschool years: Theory, research, and intervention (pp. 121-160). Chicago: The University of Chicago Press.
- 264 Shaver, P. R., & Mikulincer, M. (2007). Attachment theory and research: Core concepts, basic principles, conceptual bridges. In A. W. Kruglanski, & E. T. Higgins (Eds.), Social psychology: Handbook of basic principles (2<sup>nd</sup> ed.) (pp. 650-677). New York: Guilford.
- 265 McBain, K. A. (2010). Adult attachment theory and attachment to place: What makes a house a home? Unpublished Dissertation. James Cook University.
- 266 Seamon, D. (2014). Place attachment and phenomenology: The synergistic dynamism of place. In L. Manzo & P. Devine-Wright (Eds). Place attachment: Advances in theory, methods and research, (pp. 11-22). New York: Routledge/Francis & Taylor.
- 267 Twigger-Ross, C. L., & Uzzell, D. L. (1996). Place and identity processes. *Journal of Environmental Psychology*, 16, 205-220.
- 268 Stedman, R. (2003). Is it really just a social construction? The contribution of the physical environment to sense of place. Society and Natural Resources, 16, 671-685.
- 269 Stedman, R. (2003). Is it really just a social construction? The contribution of the physical environment to sense of place. Society and Natural Resources, 16, p. 671.
- 270 Devine-Wright, P. (2009). Rethinking Nimbyism: the role of place attachment and place identity in explaining place protective action. Journal of Community and Applied Social Psychology, 19, 426-441.

- 271 Brown, B.B., & Perkins, D.D. (1992). Disruptions in place attachment. In I. Altman & S. Low (Eds.), *Place attachment* (pp. 279-304). New York: Plenum.
- <sup>272</sup> Devine-Wright, P. (2009). Rethinking Nimbyism: the role of place attachment and place identity in explaining place protective action. *Journal of Community and Applied Social* Psychology, 19, 426-441.
- 273 Devine-Wright, P. (2009). Rethinking Nimbyism: the role of place attachment and place identity in explaining place protective action. Journal of Community and Applied Social Psychology, 19, 426-441.
- 274 Tumanan, M., & Lansangan, J. (2012). More than just a cuppa coffee: A multi-dimensional approach towards analysing the factors that define place attachment. *International Journal* of Hospitality Management, 31, 529-534.
- 275 Waxman, L., (2006). The coffee shop: Social and physical factors influencing place attachment. *Journal of Interior Design*, 31, 35–53.
- 276 Sugihara, S., & Evans, G. W. (2000). Place attachment and social support at continuing care retirement communities. *Environment & Behavior*, 32, 400-409.
- 277 Sugihara, S., & Evans, G. W. (2000). Place attachment and social support at continuing care retirement communities. *Environment & Behavior*, 32, 400, 409