

# THE ROLE OF TIME IN PLACE ATTACHMENT

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**Abstract.**—Quantitative studies have found that the length of association is an important variable affecting place attachment (Kaltenborn 1998, Moore & Graefe 1994, Patterson & Williams 1991, Vorkinn & Riese 2001). These studies, however, have provided less insight into how and why time is involved in the process of forming place attachment, as well as the meanings that make up that attachment.

This study used a mixed methods approach to shed light on time and place attachment of both visitors and locals in Grand Teton National Park and Jackson Hole, WY. Results indicate that length of association plays an important role in the process that connects people with places, and the different ways that time influences place meanings are discussed.

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## 1.0 INTRODUCTION

Many different conceptions of the bond between people and places have been hypothesized and studied. The most widespread terms include place attachment (Low & Altman 1992, Williams et al. 1992), sense of place (SOP) (Cantrill 1998, Hay 1998, Shamai 1991, Steele 1981, Williams & Stewart 1998). One consistent thread woven throughout most recent research on place attachment deals with the importance of time spent at a place (the length of association with a place). While both researchers and writers (Low & Altman 1992, Moore & Graefe 1994, Relph 1976, Tuan 1977) have made the case that time and experience in a place are important for deepening the meanings and emotional ties central to the person-place relationship, little in-depth research has studied these factors and their role in forging this connection. Accordingly, this study sought to provide a greater understanding of why and how time influences visitors' and residents' connections to places in Grand Teton National Park (GTNP) and Jackson Hole, WY.

## 2.0 PLACE ATTACHMENT CONCEPTS AND TIME—THEORY OVERVIEW

Place attachment, as defined as one's emotional or affective ties to a place, is generally thought to be the result of a long-term connection with a place (Low & Altman 1992). This is different from saying a place is special because it is beautiful, which is often a simple aesthetic response. For example, one can have an emotional response to a beautiful (or ugly) landscape or place, but this response may sometimes be shallow and fleeting. This distinction is one that Schroeder (1991) labeled "meaning" versus "preference." He defined meaning as "the thoughts, feelings, memories and interpretations evoked by a landscape," and preference as "the degree of liking for one landscape compared to another" (Schroeder 1991, p. 232). For a deeper and lasting emotional attachment to develop—in Schroeder's terms, for it to have meaning—an enduring relationship with a place is usually a critical factor.

Research has generally focused on describing two main aspects of place attachment, place identity and place dependence. Place dependence emerged from a framework proposed by Stokols & Schumaker (1981) and is described as the person's perceived strength of association with the place. The focus of place dependence has been on the functional aspects of one's connection to place: does it meet some functional or useful need? Length of association with the place, as well as past experiences, both play a role in creating and strengthening place dependence. Stokols and Shumaker (1981) argued that endurance and frequency are two critical objective properties of person-place association. Endurance refers to the length of place association, while frequency refers to the number of times the person and place are associated. Therefore, the person-place bond always encompasses a temporal element.

The concept of place identity was first elaborated upon with Proshansky et al.'s (1983) framework, and later modified by Korpela (1989), who proposed that it is a product of active environmental self-regulation, whereby an emotional attachment lies at the core of

place identity. Thus, place identity has been defined as a more emotional, or even symbolic, dimension of place attachment that is also formed and strengthened over time.

Relph (1976) and Tuan (1977) also discussed time-related concepts (insideness; rootedness) related to connections to places. Hummon's (1992) synthesis of works on community attachment found that long-term residence increases attachment feelings, partly through familiarity and experiencing significant events over time, but possibly even more importantly, through local social involvement (Gerson et al. 1977, Hummon 1992, Lalli 1992, Taylor et al. 1985). Studies of recreation places have also found that time seems to play a role in place attachment. Moore and Graefe (1994) quantitatively examined place attachment, dependence, and identity to recreational trails. They found that longer length of association, more frequent use, and greater proximity to the trails contributed to stronger scores on these measures of place attachment. They also noted differences in how these attachments form, with place dependence possibly developing quickly, while the more affective place identity required longer periods of time (Moore & Graefe 1994). Other studies have found similar relationships between place attachment and various measures of length of association (Kaltenborn 1998, Mitchell et al. 1993, Vorkinn & Riese 2001).

### **2.1 Change in Meanings Over Time**

One issue has been that few studies have separated a place's significance to an individual from how attached the individual is to the place and its meanings. As Stedman (2002) noted, place attachment (a measure of strength) is different from the place meanings (the what and why) to which one is attached. While a person's place attachment is in part based on the meanings attributed to a place, he argued the constructs should be separated.

Some researchers have noted that place meanings may be influenced by one's length of association with a place (Brandenburg & Carroll 1995, Hay 1998, Cantrill & Seneca 2000, Kiteyama & Markus 1994). For example, Kiteyama and Markus (1994) suggested that a person's sense of place may change over time, with the salience of different features changing over the course of their

time in a place. They proposed that newcomers might view their connection to a region as based more on environmental features, whereas those who have been in the region longer tend to view their connection more in the context of their social relations at the place. This hypothesis was partly supported by Mitchell et al.'s (1993) study on recreational users of a national forest. Cantrill (1998) and Cantrill & Senecah (2000) also found some evidence for this hypothesis in residents of a community in Michigan. Interview respondents who had lived in the community for less than 15 years were more likely to discuss the natural/environmental features of the area when describing their sense of place, while residents who had lived in the area for more than 15 years were more likely to reference their social relations. This reinforces the findings from various community studies (Gerson et al. 1977, Hummon 1992, Taylor et al. 1985).

### **2.2 Lingering Questions**

Quantitative studies have found that length of association with a place—through time—seems to play an important role in place attachment (Kaltenborn 1998, Moore & Graefe 1994, Patterson & Williams 1991, Vorkinn & Riese 2001). But these studies provide less insight into how and why time is involved in the process of forming place attachment. Qualitative studies have begun to address these relationships. For instance, studies using interviews have pointed to aspects of time that influence the attachment process through the development of different place meanings, changes in those place meanings over time, and the role of continuity in strengthening person-place bonds (Brandenburg & Carroll 1995, Cantrill 1998, Cantrill & Senecah 2000, Gustafson 2001, Hay 1998, Mitchell et. al. 1993, Twigger-Ross & Uzzell 1996).

### **2.3 Study Purpose**

In the present study, quantitative methods were used to confirm and further describe the role of time in place attachment, and qualitative methods were used to describe the underlying process of why and how time can influence the formation of place attachments and their associated meanings. Based on previous research, the key research question explored was: 1) Do people who have a longer length of association with a place (in Grand Teton National Park (GTNP) and elsewhere) express

more emotional or social meanings when describing that important place? In contrast, do people who have a shorter length of association refer to either the physical setting or an activity as more important when they describe their connections to that important place? In other words, is a person's length of association with a place related to the nature of his/her attachment to it?

### **3.0 METHODS**

#### **3.1 Study Area**

Jackson Hole (JH) was the broad area of focus for this project. JH is located in northwest Wyoming, and encompasses the town of Jackson and Grand Teton National Park (GTNP). GTNP is one of the most recognized mountain areas in the world, offering incredible mountaineering, hiking, rafting, skiing, and other outdoor pursuits. GTNP receives over three million visitors a year, the majority during the summer. The town of Jackson, WY, has a year-round population of about 8,000 people (as of 2000), is located about 15 miles from the heart of the park, and is heavily dependent upon tourism revenues. In addition, over 95 percent of the immediate area is public land, protected by various degrees not only in GTNP, but also in National Forests, Wilderness areas, and the National Elk Refuge.

#### **3.2 Data Collection**

Two methodological approaches, a drop-off/mail-back questionnaire and personal interviews, were used to collect data for this study. A stratified random sampling approach (by date, time of day, and entrance gate) was used to distribute the questionnaire to one adult in private vehicles entering GTNP from July through October 2000. To increase the response rate, follow-up procedures were used based on Dillman's Total Design Method (Salant & Dillman 1994). The questionnaire collected information on the visitor's length of association with GTNP. Questions addressed both frequency and endurance (Stokols & Schumaker 1981) of this connection: 1) length of stay (in hours or days) on this visit to GTNP, 2) number of visits to GTNP, and 3) the number of years they had visited GTNP.

The survey also collected information on respondents' special places in GTNP and elsewhere in an open-ended

format. Visitors were asked to list up to three important places in the park, describe the reasons why those places were important, and estimate how much time they had spent at each place. This open-ended approach was used in order to capture the depth of meanings, while the use of a survey allowed for a multitude of responses to better identify the range of visitors' experiences of GTNP.

The personal interviews were conducted with a purposive sample of visitors to GTNP and year-round residents of JH. Selection of individuals was based on key variables of interest for place attachment. Criterion sampling was used to access a diversity of visitors based on variables that included number of visits to the park and whether individuals had special places in GTNP (Miles & Huberman 1994). Nine separate interviews were conducted with GTNP visitors in August and September of 2001, four of which were "couple" interviews, where both members of the couple participated, for a total of 13 people participating in GTNP visitor interviews. In addition, 29 personal interviews were conducted with JH residents between August and November 2000. The key variable of interest was length of residency in JH; the number of years that these interviewees had lived in JH varied from 1½ years to more than 65 years. A snowball sampling approach was used to identify potential participants (Miles & Huberman 1994).

A total of 38 JH resident and GTNP visitor interviews were thus conducted, involving 42 individuals. These interviews were semi-structured in format (Newman & Benz 1998) and used an interview guide approach (Patton 1990). The interviews included discussion of an important or special place in the JH valley, and then of an important or special place elsewhere. A key objective was to ensure that interviewees used their own words or meanings to describe their connections to places. The GTNP visitor interviews lasted 20-45 minutes (averaging about 30 minutes), while the JH resident interviews lasted 30-60 minutes.

### **4.0 ITERATIVE ANALYSIS**

The survey data provided a broad view of the role that time played for a large number of people. The interview data were then used to explore in-depth the meanings

of places and the role of time. The majority of places examined in this study were recreational places, but other types of places such as homes and communities were also described.

#### 4.1 Survey Data Analysis

Analysis of the survey data took two forms, both quantitative and qualitative. Place meaning questions were first analyzed qualitatively. First, the GTNP places that were listed were categorized into 86 distinct places, based on the name of the place or the type of place. The types of places mentioned by respondents as special in GTNP varied greatly in terms of scale, from specific (Inspiration Point, the Chapel of Transfiguration), to more general (Jenny Lake, Antelope Flats Road), to very broad, such as the whole park. Respondents could list multiple reasons for the importance of places, resulting in a total of 1,299 reasons cited. Reasons for a place's importance were first coded in NVivo (QSR\*NUDIST Vivo 1.0, 1999), a qualitative data analysis software program. To establish codes, an inductive approach was applied to develop categories of codes based on respondents' meanings. These categories were refined as analysis progressed.

After initial coding, a total of 36 separate categories of place meanings were identified. A reliability analysis was then conducted, and after further refinement and collapsing of these categories, coding based on 17 separate categories was finalized (see Smaldone et al. 2005 for complete code list and definitions). These codes were next transferred to SPSS for further analysis. All respondents who had mentioned a type of place categorized by place code were identified (for instance, "environmental setting or characteristics"), and then these cases were compared with those who had not identified this place code. Thus each place code was measured on a nominal level referring to the presence or absence of a code for each respondent. Certain meanings were double (or even triple) coded, as it was sometimes impossible to exclude overlapping meanings based on some of the respondents' answers. Responses that were double coded were placed in both coding categories during analyses. T-tests, cross-tabulations, and Chi-square statistics were used to analyze statistical relationships between the time (length of association) variables and the place

meaning codes; all results reported here were statistically significant,  $p < .05$ .

#### 4.2 Interview Data Analysis

Personal interviews were tape recorded with the permission of the interviewees and transcribed into a Word document, which was then also transferred into NVivo. The unit of analysis in this step was the words and phrases expressed by the participants. The interviews were first coded inductively, allowing the codes to emerge from the data, rather than being set *a priori*. After the first interview was coded, the coding scheme was then used for the next interview, which was then built upon and refined during this process. Each successive interview led to more categories and helped to distinguish and elaborate the overall coding scheme, as refined codes were applied to earlier interviews. Clusters and categories of codes were also established as the coding continued: NVivo allows for creating a hierarchical "tree" of codes.

### 5.0 RESULTS AND DISCUSSION

A total of 649 questionnaires were distributed during the sampling period in GTNP. Of these, 493 visitors returned completed questionnaires, yielding a 76 percent response rate. In addition, the analysis included questionnaires returned by the local and visitor interviewees (28 total).

In the following sections, results from the questionnaires and interviews are presented and discussed. First, differences in visitor characteristics are examined between people who had a special place in GTNP and those who did not, focusing on length of association. Differences in place meanings based on length of association are then explored. Finally, results from interviews are discussed in light of the findings from the questionnaires.

#### 5.1 Who had a Special Place in GTNP?

Forty-eight percent of visitors said specific places in GTNP were special or important to them. Statistically significant differences between those who had a special place and those who did not were found based on trip characteristics including visitors' frequency of visits, endurance of association, and length of stay. Those reporting a special place had a statistically significant



longer length of stay (3.4 days vs. 2.2 days,  $t=3.134$ ), greater number of visits to the park (9.6 visits vs. 2.0 visits,  $t=6.352$ ), and longer association with the park (16.1 years vs. 9.7 years,  $t=4.317$ ).

Statistical significance also was found between repeat visitors who had a special place and first-time visitors who did not. Of repeat visitors, 75 percent reported a special place, while only 45 percent of first timers did ( $X^2=44.72$ ). To further assess if numbers of visits made to GTNP was related to special places, respondents were also categorized in terms of four groups: 1) first visit, 2) two to four visits, 3) five to nine visits, and 4) ten or more visits. Statistically significant associations were found, indicating that as the number of visits increased, so did the likelihood of reporting a special place. Of particular note, 97 percent of visitors who had visited ten or more times reported a special place in the park ( $X^2=54.53$ ). This finding is consistent with the results of past research that longer lengths of association are associated with stronger measures of place attachment (Kaltenborn 1998, Moore & Graefe 1994, Taylor et al. 1985, Vorkinn & Riese 2001). While this study did not measure strength of place attachment, the finding that people who reported more visits and had more years of association with GTNP were more likely to report a special place lends support to prior findings and the proposition that greater association with a place leads to place attachment (Relph 1976, Tuan 1977).

## 5.2 Frequency, Endurance, and Place Meaning

Visitors described a variety of place meanings, as represented by the definitions of place meaning codes

**Table 1.—Frequencies of Place Meanings**

Place Meaning Code	Number of respondents using meaning	Percent of respondents with a special place
Physical setting	227	73
Outdoor recreation	165	53
Emotional connections	95	30
Wildlife	92	30
Escape	85	27
Social aspects	76	24
Special moments	49	16
Undeveloped	31	10
Time or tradition	26	8.3
Lodging or dining facilities	25	8
Inspire	16	5.1
Culture or history	15	4.8

presented in Table 1. The most common meanings were: 1) the physical setting, 2) outdoor recreation activities, 3) emotional connections, 4) wildlife viewing, 5) escape, 6) social ties, 7) special moments, 8) the undeveloped nature of the park, and 9) tradition/time spent.

Statistically significant differences were found between visitors' length of association and the place meanings they reported (Table 2). Using Chi-Square analysis, repeat visitors were significantly more likely than first time visitors to report the following place meanings as important (generally on at least a two-to-one ratio): outdoor recreation, solitude, social ties, special moments, and time or tradition. Differences were not found for such place meanings as the physical setting and visitors' emotional connections to places.

**Table 2.—Differences in place meanings between repeat & first time visitors**

Place meaning	Percent of repeat visitors using the place meaning	Percent of first time visitors using the place meaning	Chi-square statistic
Physical setting	71%	77%	NS
Outdoor recreation	60%	34%	* $X^2=16.715$
Emotional connections	32%	27%	NS
Social ties	29%	12%	* $X^2=9.521$
Special moments	19%	7%	* $X^2=6.267$
Solitude	15%	5%	* $X^2=5.832$
Time or tradition	11%	2.4%	* $X^2=5.271$

\* Statistically significant, at least  $p<.05$ .

T-tests were also used to test differences between place meanings and the variables associated with time. In relation to number of visits, place meanings significantly associated with more visits (frequency) included outdoor recreation ( $t=2.465$ ) and the physical setting ( $t=2.295$ ). Certain place meanings were more likely to be reported by those who had been coming to GTNP longer (endurance) and thus had stronger connections with park places: outdoor recreation ( $t=3.434$ ), social ties ( $t=3.117$ ), special moments ( $t=2.091$ ), time or tradition ( $t=2.181$ ), and lodging ( $t=1.984$ ).

Taken together, these findings only partly support previous research. Both theory (Cantrill & Senecah 2000, Kiteyama & Markus 1994) and research evidence (Gerson et al. 1977, Hummon 1992, Lalli 1992, Taylor et al. 1985) suggest that longer associations with a place may shift the basis of attachment from physical aspects of the place to social aspects of the place. In support of previous research, repeat visitors (frequency), as well as those who had been coming for more years (endurance), were associated with more reports of social connections to places in GTNP. While the overall category of emotional connections found no differences between repeat and first-time visitors, the repeat visitors were more likely to report “special moments” and “solitude,” both of which have emotional connotations.

Contrary to expectations, no differences were found between repeat and first-time visitors in regards to reports of the physical setting; this meaning was the most commonly reported one, across all visitors. In addition, those with more visits (frequency) were also more likely to report meanings involving the setting as well. Interestingly, repeat visitors, more visits, and more years visiting were also associated with higher reports of outdoor recreation, a meaning that could be hypothesized to be closely tied to the setting. One likely reason for these differences may be the type of place studied in the present research. Most previous research of this type was based on community studies, not recreation destinations or national parks. The physical setting was most frequently reported by all visitors as the reason that GTNP was special, regardless of length of association. GTNP is a vacation destination of great scenic beauty, and also a place where outdoor recreation is important

for visiting. Therefore, it is not surprising that most people repeatedly return to GTNP because of the park’s scenic values and opportunities to recreate. This finding suggests the importance of considering the type of place under study and its relation to development of different place meanings. This relationship needs further study, given that the kind of place appears here to be a factor in the kinds of meanings people assign to that place and the process of place attachment itself.

## 5.3 Interview Results and Discussion

### 5.3a Interviews with Residents

In analyzing the interviews from the JH residents, every important place mentioned was a place where that person had a high level of “intensity” of visitation in terms of length of association; this use of the term “intensity” is similar to the concept of “experience use history” described by Schreyer et al. (1984). Intensity of visits describes how frequently a person visits the place in a certain number of years, and attempts to capture both the frequency and endurance of one’s connection to a place. Each place discussed by interviewees was given an intensity ranking of low, medium, or high. For instance, examples of low intensity of association for interviewees might include a person visiting a place five times over 30 years, or two times over five years, while examples of high intensity of association might include a person visiting a place 50 times over 25 years, or 10 times over two years. Likewise, places outside the JH area were ones with which local interviewees had at least a moderate, if not high, level of intensity of association.

### 5.3b Interviews with Non-residents

The visitor interviews also revealed the role of time in place attachment. Eight of 13 interviewees described a special place in GTNP, whereas the other five did not have a special place. In looking at the intensity of association with GTNP, the intensity varied much more among visitors than locals. This would be expected because for the non-resident interviewees, GTNP is primarily a vacation destination (albeit a special one for some of them) and therefore not a place where they have spent a great deal of time, especially in comparison to the residents. In terms of intensity of association with GTNP, of the eight visitors who described an important place, one was high; one had a high level earlier in her life, but

recently was low; two were medium; and four were low. And for the five visitors who did not describe a special place, the intensity of association also varied: two were high, one was medium, and two were low.

However, when asked to discuss an important place outside the JH area, all of the visitor interviewees except one could easily think of a place, and four of the thirteen described their homes or a place where they had lived, revealing the importance of home places (Gunter 2000). The other interviewees talked about favorite or cherished vacation spots, and all were places they had visited a number of times, again revealing at least a moderate intensity of association in their connections to special places they discussed.

#### **5.4 Discussion of Interviews and Place Meanings**

Moore and Graefe (1994) hypothesized that the ways in which different types of place attachments form also differ. Place dependence seemed to develop comparatively quickly, while the more affective place identity seemed to require more time. Similarly, others (Cantrill & Senecah 2000, Kiteyama & Markus 1994) have hypothesized that over time, social connections to places become more salient and important; whereas in the beginning, it is often attributes related to the physical setting that are important.

These hypotheses were supported by the results of the interviews. One distinction made by a number of interviewees was that their feelings about a place changed over time as they gained experience with the place. They noted that the reasons for first moving to, or visiting places in, JH changed or had grown as they lived in the place and spent more time there. They seemed to be distinguishing between “preference” and “meaning” (Schroeder 1991), and this difference is presented in the next section as one of “attraction” as opposed to “attachment.”

#### **5.5 Attraction vs. Attachment**

A number of the people interviewed for this study described how they became attached or connected to special places, both in JH and outside the valley. Many interviewees acknowledging place connections generally

described differences in the meanings of places between their initial impressions of attraction to a place and their lasting attachment to that place (at least 12 interviewees explicitly discussed this difference, and another five implicitly alluded to it). They often said that the beauty of the physical setting was the first thing they noticed. However, this attraction was quite different from the meanings and stronger emotional attachments that developed through living in a place for a longer time, and it was this lengthier attachment that resulted in more meaningful emotional and social connections to that place. While many interviewees described this phenomenon in various ways, several quotes will serve to briefly illustrate this idea.

IC, a 25-year female who lived in JH 1½ years and has since moved away, commented that, “... I took the job here because I knew that I loved this place, in the sense that I loved the scenery. I mean I had no attachment to it yet.” Another interviewee also discussed this difference between attraction and attachment in a similar fashion. OT, a 48-year old married woman who had lived in JH for 12 years, commented:

Well certainly while visiting, one can't help but be amazed by the whole thing, it is a beautiful and all that—blah, blah, blah. So when we knew we were moving to Jackson of course we were excited. I tell you it is really different, I have a completely different feeling about Jackson than that feeling. Like the feeling I would imagine what a visitor feels like when they come here and it's just so beautiful. But now I feel, I feel attached, I feel responsible, you know it feels more like family and not just 'I'm on vacation' having a visit. It's just a really different feeling, and it grew slowly. No one can come here and not love this place in some ways. But the attachment feeling now for this place has definitely grown over time. You know it took years really. I think it probably started leaking in maybe after about five years, that I really felt like this was totally a home base.

For OT, as well as other interviewees, being in a place, spending time there, and having experiences there is

critical for a place to become emotionally significant, rather than just another pretty place—it becomes a place marked with personal and socially shared memories and events. These examples affirm earlier research and hypotheses emphasizing that over time, one's connections to places tend to expand beyond a focus on environmental or setting features to valuing deeper emotional or social aspects of the place (Cantrill & Senecah 2000, Kiteyama & Markus 1994, Moore & Graefe 1994).

## 6.0 CONCLUSIONS

The importance of time in connecting people to places was affirmed in the present study. The results from the questionnaires lend some support to prior findings and hypotheses that length of association with a place is an important factor in the development of place attachment. People who reported more visits and had more years of association with GTNP were more likely to report a special place than those with shorter lengths of association. The questionnaire findings also indicated that length of association affects the meanings of place attachment. The results revealed consistencies as well as discrepancies in regards to the research question addressed. Findings indicated that it is important to consider the type of place when assessing meanings—a critical consideration for recreation managers.

In regards to the interviewees, an important distinction a number of them noted was that their feelings about a place changed both over time and because of their experiences at the place. This aspect of person-place relationships was referred to as “attraction vs. attachment” in this study. Others (e.g., Cantrill & Senecah 2000, Hummon 1992, Kiteyama & Markus 1994, Lalli 1992, Moore and Graefe 1994, Schroeder 1991) have noted these kinds of changing place meanings over time, theorizing that different types of place attachments develop in different ways. Over time, more emotional or social connections to places seem to become more salient, in contrast to early stages of one's connections to places, when physical settings are often most important. Based on their inter-related conceptions, these frameworks suggest that every person-place bond has its locus within an ever-changing temporal scale that provides a critical context affecting that bond.

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