Satisfaction Derived through Leisure Involvement and Setting Attachment

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Abstract. This investigation examined the effect of activity involvement and place attachment on leisure satisfaction among three groups of hikers along the Appalachian Trail (AT). The three groups differed in the type of setting they perceived they had visited along the AT: wilderness, semi-wilderness, and underdeveloped recreation area (p < .05). It was hypothesized that the opportunity to enjoy the activity and setting would be sources of satisfaction among respondents. It was also hypothesized that these effects would be strongest among wilderness hikers. Results indicated that only the attraction dimension of activity involvement and place identity dimension of place attachment were significant predictors of hikers’ satisfaction (p < .05). Further, the type of setting visited did not impact the strength of these effects. These results illustrate that the intrinsic elements of the activity and setting can be a source of satisfaction alone.

Keywords. Satisfaction, leisure involvement, place attachment, Appalachian Trail, hiking

Résumé. Cette étude examine l'effet que l'engagement aux activités et l'attachement à l'environnement ont sur la satisfaction de trois groupes de randonneurs le long de la Chemin Appalachaie (PA). Ces trois groupes étaient différents dans la façon de percevoir l'endroit que l'on a visité au sein des PA, la nature sauvage et mésosauvage et les lieux de récréation non développés (p < .05). L'hypothèse a été que la chance de réjouir de ces activités et de l'emplacement était une source de satisfaction parmi les interroges. Une autre hypothèse a été que ces effets seraient plus forts parmi les randonneurs qui ont visité la nature sauvage. Les résultats indiquent que c'est uniquement l'attac-

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Introduction

As noted by Manning (1999), researchers have recognized for some time that leisure satisfaction has been an important measure or indicator of the quality of individual leisure experiences (Bultena & Kiesling, 1969; Dregi, Grabe, & Tine, 1990; Floyd, 1997; Lime & Stankey, 1971; More & Bavyk, 1979; National Academy of Sciences, 1969). Much of satisfaction research has been rooted within expectancy-value theories (Yeh & Agar, 1975; Oliver, 1997) that have most often been applied in the consumer literature to understand consumers' satisfaction responses to the purchase of specific goods and services. The application of this approach in the leisure literature is exemplified in Bullock and Klenke's (1986, p. 249) early conceptualization of leisure satisfaction as "a function of the degree of congruence between aspirations and the perceived reality of experiences." This approach suggests that participants engage in recreation activities with the expectation that this will fulfill specific psychological or physiological needs. Further, these theories infer that participants have certain expectations concerning outcomes related to participation. Satisfaction with specific leisure experiences is said to arise from individual judgments concerning the congruence of what was expected and what was experienced. The disparity between expectation and actual experience then, determines the degree of satisfaction or dissatisfaction (Schreyer & Roggenbuck, 1978).

While researchers have employed a variety of techniques to operationalize this framework, in the context of leisure research, they have typically shown that overall satisfaction is influenced by two categories of variables: (a) situational factors which refer to environmental characteristics such as the presence and behavior of others in the setting, the condition of the setting, and management decisions related to the setting; and (b) subjective factors which refer to individual evaluations of encounters with other users, evaluations of other users' behavior, evaluations of setting conditions and design, and visitor motivations (Graefe & Folger, 1986; Whiteman & Holleisbeker, 1998).
Several authors have noted that the "information processing view" supported by expectancy-value theories (Holtzworth & Hirschman, 1982; Williams, Patterson, Roggenbuck, & Watson, 1992). These authors have indicated that the evaluation of leisure and other consumer experiences is not always based on rational decisions where the individual perceived to be a logical thinker who solves problems to make decisions related to specific activities and settings. For example, in the context of outdoor recreation, much leisure research has assumed that individuals seek out specific setting attributes that support their leisure pursuits. Consequently, natural resource managers have attempted to manage settings to support these activities. Williams et al. (1992, p. 30) have suggested that this line of thought is related to "an engineering-like emphasis on the manipulation and control of tangible properties of natural resources to meet recreation needs." They noted that a limitation of this approach is that settings come to be viewed as means rather than ends. In these contexts, through the manipulation and reproduction of certain environmental characteristics, there exists the belief that managers can, contrive desired leisure experiences. As a consequence, management's emphasis on values associated with the emotional and symbolic sentiment associated with settings can become secondary or even lost. Research has also shown that recreationists can hold strong preferences for specific settings even though settings with similar attributes are equally accessible (Manfredo & Anderson, 1987). Is it possible then that other more intrinsic elements may also be predictive of leisure satisfaction? Perhaps, the ability to enjoy activities or settings that are personally important regardless of the instrumental value related to their activity preferences, may also be a source of leisure satisfaction. With this in mind, we examined the effect of two subjective variables, activity involvement and place attachment, on hikers' satisfaction with their visit along the Appalachian Trail (AT). We also tested for variation of this effect using respondents' perceptions of the type of setting visited along the trail, namely, wilderness, semi-wilderness, and undeveloped recreation areas.

Related Literature

Involved and Attached Recreationists... Satisfied Recreationists?

Two variables that offer insight into recreationists' affective attachment to activities and settings are involvement and place attachment. We hypothesized that the opportunity to enjoy specific leisure experiences will be a source of satisfaction aloud. First, with regard to activity
involvement, most involvement research has focused on the construct's enduring properties. Early conceptualizations of this line of research (Sherif & Cantril, 1947; Sherif & Hood, 1951; Sherif, Shetler, & Nebergall, 1965) conceptualized involvement as the strength or extent of the cognitive linkage between the self and a leisure activity. In this sense, involvement reflects the degree to which a person devotes him or herself to an activity or associated product (Engel & Blackwell, 1982; Peter & Olson, 1987; Sheth & Tankian, 1985; Zabcikowsky, 1985). It is considered enduring because the level of importance an individual ascribes to an activity is dependent on his or her personal values which are less susceptible to variation induced by situational stimuli.

In the leisure literature, there is general consensus that multi-dimensional measures of the involvement construct are best suited (Harvie & Dumas, 1997, 1999). Dimensions that have received the strongest support include: (a) emotion, which is comprised of a combination of items measuring the importance of the activity to the individual and pleasure derived from it, (b) self expression, which refers to self-representation, or the expression of oneself that individuals wish to convey to others through engagement with certain leisure experiences, and (c) centrality, which suggests that an activity may be considered central if other aspects of an individual's life are organized around that activity (McIntyre & Pigram, 1992). These three dimensions of activity involvement represent conceptually separate and distinct aspects of activity involvement and constitute an involvement profile related to an individual's participation in a particular leisure activity, or type of activity, and thus indicate the overall relevance or meaning of that activity in the context of the individual's life (Wiley, Shaw & Hively, 2006).

While leisure researchers have yet to directly examine the effect of activity involvement on leisure satisfaction using current conceptualizations of involvement, there is indirect evidence to support our hypotheses. Studies have shown that recreational activities high psychological involvement or absorption during an activity are more inclined to define these experiences as peak and optimal (for review see Manzelli & Kleiber, 1997). For example, Csikszentmihalyi's (1990) model of flow describes optimal experiences as moments that "occur when a person's body or mind are stretched to its limits in a voluntary effort to accomplish something difficult and worthwhile" (p. 3). Manzelli and Kleiber (1997, p. 91) also noted that "the greater freedom allowed by leisure to select and control individual activities should allow one to maintain or achieve a match between challenges and skills" and, consequently, experience more sat-
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national stimuli. 

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structure are best suited (Havitz & that have received the strongest s is comprised of a combination of the activity to the individual’s expression, which refers to self-
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theorists with high psychological activity are more inclined to define 2 (for review see Murnell & Kleiber, th derives 1 "locus when a person’s body of mental effort to accomplish some-
and Kleiber, 1997, p. 91) followed by leisure to select and con-
one to maintain or achieve a match consequently, experience more sat-

ifying leisure. While this conceptualization of involvement is situational and subject to temporal variation over the duration of the experience (Hull, Stewart, & Young, 1992), research in consumer behavior suggests that situational and enduring components of involvement interact to produce a state of “feit” involvement; the overall subjective feeling of personal relevance (Celsi & Olson, 1988; Richins & Bloch, 1986). Further, the greater the level of enduring involvement, the more responsive indi-
iduals are to relevant situational stimuli in the purchase environment.

In the context of tourism purchase decisions, Pritchard and Howard (1997) observed that loyal consumers were more likely to report being satisfied with the services provided by the specific vendor (i.e., United Airlines, a Hilton Hotel, and the Tokaike Golf Course) and also scored highest on the self expression (sign value) dimension of involvement.

Based on this literature, it is computationally consistent to expect that as respondents’ level of involvement increases, so should their satisfaction with their visit.

We also hypothesized that place attachment will have a similar effect on leisure satisfaction. While it has been noted that the place attachment construct is subsumed by a variety of analogous concepts drawn from several fields of knowledge, there is general agreement that humans can and do develop emotional and affective bonds with geographic settings (Altman & Low, 1992). Studies have shown that the nature of place attachment is subject to spatial variation where the atti-
date object can be as specific as individual homesites (Jorgensen & Stod- man, 2001; Kallenborn, 1997), or as broad as recreation areas (Williams et al., 1992), rivers (Bricker & Kerstetter, 2000), hiking trails (Moore & Graefe, 1994), communities (Theodori & Lofgren, 2000; Wolk, 2001), or even an entire continent (Steele, 2000). Studies have also demonstrated considerable variability concerning reasons for setting attachment. For example, both Meach and Manor (1998) and Hidalgo and Hernández (2001) observed that respondents’ social bonds (e.g., friends) in specific communities were a primary reason for their attachment to local communities. Hay (1998) demonstrated the importance of cultural ties to community as a source of place attachment among residents in a rural setting in New Zealand. Finally, several studies have noted that recreationists with previous setting experience are often more attached that their less experienced counterparts (Bricker & Kerstetter, 2000; Moore & Graefe, 1994; Williams et al., 1992).

In the leisure literature, most conceptualizations of the construct have revolved around two components: place identity and place dependence
(Schreyer, Jacob, & White, 1981; Williams & Roggenbuck, 1989). Place dependence is conceptualized as the instrumental or functional value ascribed to a setting for its ability to facilitate desired behavioral goals such as leisure experiences (Stokol & Shumaker, 1981). In this sense, a setting can be viewed as a mess for an end, where the setting provides a context for recreationists to enjoy certain leisure experiences. Alternatively, place identity refers to the symbolic and emotional attachments recreationists form with "special places" (Schreyer et al., 1981). In this context, the setting can define personal identity similar to that expressed by aboriginal cultures and their connections to native lands (Hay, 1993).

The conceptualization of place identity also implies that the setting can be an end in itself. For example, in the literature reviewed above, several studies examined respondents' emotional and affective bond with special places resulting from early childhood experiences (Kyle, 2001), significant events occurring throughout the lifecycle (Kaltenborn, 1997), and relationships with friends and family (Mesh & Manor, 1998). In these studies, the value assigned to the setting had no instrumental outcome; settings were important for what they represent. Consequently, people's attachment to the setting could impact their leisure satisfaction in two ways. First, respondents' satisfaction could be derived from the setting because it provides a context to enjoy a favored leisure experience. Alternatively (or additionally), the opportunity to visit a special place may also enhance respondents' evaluation of their experience.

We also modeled activity involvement as an antecedent of place attachment. While this relationship has been reported in earlier papers written from these data (Kyle et al., 2003), other studies have also reported several correlates of involvement that were related to place attachment, including activity importance (Moore & Graefe, 1994), specialization (Bricker & Kerstetter, 2000), and intensity of engagement (Vorkinn & Reise, 2001).

With this literature in mind, Figure 1 depicts the model of our hypothesized relations examined in this investigation. Given that both involvement and place attachment examine the personal relevance of activities and settings hold for recreationists, we hypothesized that the opportunity to enjoy these activities and settings will be a significant source of satisfaction alone. Further, as the intensity of involvement and place attachment increases, so too will hikers' satisfaction with their visit along the AT. In this sense, the satisfaction hikers derive from their visit along the AT is related to the intrinsic rewards and benefits provided through activity and the setting.
Figure 1: Hypothesis Model

Hypothesis 1: Engagement → Attraction → Continuity → Satisfaction → Loyalty

Engagement: Active participation, interaction, and investment in the relationship.

Attraction: Positive emotional response to the service or product.

Continuity: The intention to continue the relationship.

Satisfaction: Perception of the service or product, leading to positive emotional responses.

Loyalty: The state of remaining with a service or product despite perceived alternatives.

Note: Arrows represent the hypothesized relationships between the variables.
Wilderness Experiences

There is also evidence to suggest that recreationists' experience with certain activities and settings (strong correlates of activity involvement and place attachment) influences their preferences for specific setting attributes. For example, Bryan (1977) first observed that the most "specialized" anglers had specific preferences for the type of setting they chose to fish. Specialized anglers are also more concerned with issues related to resource preservation. Viden and Schoyer (1988) observed that more specialized hikers prefer pristine or wilderness-like settings, whereas low-specialists were more accommodating of developed and impacted settings. Similar findings in other contexts have been reported (Ditto, Loewig, & Choi, 1992; Hagstrum, 1991; Gahwiler & Haartz, 1998; Haagstrum & McDonald, 1983; McFarlane, Boyall, & Watson, 1993). Williams et al. (1992) observed that recreationists expressing strong attachment to wilderness expressed greater concern for ecological impacts and encounters with other hikers. Consequently, we also examined the effect of hikers' subjective perceptions of the type of setting visited along the AT (i.e., wilderness, semi-wilderness, and undeveloped recreation area) on the relationships between activity involvement, place attachment, and satisfaction. More specifically, we hypothesized that the effect of activity involvement and place attachment on satisfaction would be strongest among wilderness users as opposed to those hiking along less pristine areas of the AT. We contend that wilderness users' greater experience (Williams et al., 1992) and stronger preference for specific activity and setting related attributes (McFarlane et al., 1998) better equips them to attain desired setting and experience-related goals.

Methods

Study Setting

The Appalachian National Scenic Trail stretches 2,160 miles over fourteen different states along the eastern region of the United States (see Figure 2). It passes through more than sixty federal, state, and local parks and forests. The AT began as a vision of forester Benton MacKaye, and was developed by volunteers and opened as a continuous trail in 1937. It was designated as the 1st National Scenic Trail by the National Trails System Act of 1968. The Trail is currently protected along more than 99% of its course by federal or state ownership of the land by rights-of-way. Social and environmental conditions vary considerably along the length of the trail, ranging from relatively pristine settings with few encounters with other users to heavily impacted areas with regular...
encounters. Current estimates provided by the National Park Service suggest that the trail attracts approximately 4 million visitor-days each year.

**Figure 2**
Map of the Appalachian Trail

**Design and Sample**
Data were collected from users of the AT over the summer and fall of 1999. Sampling occurred along the entire length of the trail. A stratified, systematic sampling technique was employed to obtain a representative sample of all AT hikers (Babbie, 1995). To accomplish this, the length of the trail was segmented into 22 sections based on use estimates provided by the various associations that manage the trail. Every third trail user over the age of 18 was intercepted by volunteers or paid staff and requested to provide their name and address to be sent a survey instrument. Sampling occurred between the hours of 8:00 am through 8:00 pm. A total of 2,847 AT visitors agreed to participate (approximately 95% response rate) in the study and were mailed a questionnaire within two weeks after their visit. Two weeks after the initial mailing, visitors were mailed a reminder/thank-you postcard. Visitors who did not return a completed questionnaire within four weeks of the initial mailing were mailed a second copy of the questionnaire. Finally, non-respondents were sent a third survey instrument. This sampling procedure yielded 1,879 completed questionnaires (66% response rate). The data and analysis presented in this paper are based on the mail-back survey results.
Measures and Analysis:
The three dimensions of activity involvement (i.e., self expression, centrality, and attraction) were measured using fourteen items adapted from McIntyre and Fugate's (1992) measure of involvement (see Table 1). For place attachment, eight items were adapted from Williams and Rognenback's (1980) measure of place attachment and satisfaction was measured using five items. To examine the effect of perceived setting type on the relationship between activity involvement, place attachment, and satisfaction, takers were divided into one of three groups based on their perception of the setting they encountered during their visit. Thus, perceived setting type was operationalized using an interview respondents to indicate the type of setting visited along the AT. The three response categories were: (a) wilderness — a place generally unaffected by the presence of people, providing outstanding opportunities for solitude and self-reliance, (b) semi-wilderness — the kind of place where complete solitude is not expected, but the environment appears mostly unaffected by people, and (c) undeveloped recreation area — the kind of place where a natural setting is provided but seeing other people is part of the experience.

Because the AT stretches almost 2,200 miles with setting conditions varying considerably, respondents who hiked more than 25 miles on this particular visit were excluded from the analysis. We anticipated that their exclusions would provide us with a sample of respondents who visited an area that was relatively uniform in terms of its character and management (e.g., wilderness, semi-wilderness, undeveloped recreation area) and whose subsequent evaluations of their experience would be based on more finite attributes. This yielded a final subsample of 921 respondents. Of these, 52 indicated visiting wilderness, 561 semi-wilderness, and 278 visited an undeveloped recreation area. Our hypothesized model was tested across each of these three groups using LISREL5's multigroup procedure (i.e., invariance testing).

Construct reliability estimates were calculated for all subdimensions. The alpha values for the dimensions, depicted in Table 1, ranged between 67 (Satisfaction—Wilderness hikers) through 96 (Centrality—Undeveloped Area hikers). While Nunnally (1978) has suggested that Cronbach's alpha coefficients which are equal to or greater than .70 are acceptable, Cortina (1993) has indicated that, in scales with a reduced number of items (e.g., six or less), .60 and above may also be acceptable. On the basis of this, we concluded that all scales were reliable.

Covariance structure analysis, a component of LISREL (version 8.5; Jöreskog & Sörbom, 2001), was used to simultaneously test the
Table 1  
Item Means and Construct Reliabilities

<table>
<thead>
<tr>
<th>Scale Items</th>
<th>Wilderness</th>
<th>Semiwilderness</th>
<th>Undeveloped</th>
</tr>
</thead>
<tbody>
<tr>
<td>Involvement</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attraction</td>
<td>.88</td>
<td>.88</td>
<td>.89</td>
</tr>
<tr>
<td>b) Hiking is important to me</td>
<td>.83</td>
<td>4.14</td>
<td>4.09</td>
</tr>
<tr>
<td>c) Participating in hiking is one of the most satisfying things I do</td>
<td>.88</td>
<td>4.04</td>
<td>3.98</td>
</tr>
<tr>
<td>d) Participating in hiking is one of the most enjoyable things I do</td>
<td>.88</td>
<td>3.99</td>
<td>3.93</td>
</tr>
<tr>
<td>e) Hiking interests me</td>
<td>.68</td>
<td>4.75</td>
<td>4.32</td>
</tr>
<tr>
<td>f) Hiking is pleasurable</td>
<td>.66-.82</td>
<td>4.46</td>
<td>4.46</td>
</tr>
<tr>
<td>g) I really enjoy hiking</td>
<td>.66</td>
<td>4.48</td>
<td>4.42</td>
</tr>
</tbody>
</table>

Self Expression  
a) Hiking says a lot about who I am | .79 | 3.74 | 3.64 | 3.70 |
b) You can learn a lot about a person by seeing them hiking | .43 | 3.21 | 3.27 | 3.36 |
c) When I participate in hiking I can really be myself | .65 | 3.96 | 3.84 | 3.83 |
d) When I participate in hiking I can see the way I want them to see me | .53 | 3.34 | 3.32 | 3.39 |

Costality  
a) A lot of my life is organized around hiking | .89 | 2.89 | 2.72 | 2.78 |
|b) Hiking has a central role in my life | .92 | 2.93 | 2.78 | 2.90 |
|c) I enjoy discussing hiking with my friends | .57 | 3.98 | 3.62 | 3.64 |
|d) A lot of my life is organized around hiking activities | .83 | 2.82 | 2.67 | 2.79 |

Place Attachment  
Place Identity | .87 | .86 | .87 |
|a) This trail means a lot to me | .69 | 3.90 | 3.92 | 3.90 |
b) I am very attached to the Appalachian Trail | .89 | 3.38 | 3.26 | 3.31 |
c) I identify strongly with this trail | .87 | 3.21 | 3.05 | 3.14 |
d) I wouldn't substitute any other trail for the type of recreation I do here | .64 | 3.49 | 3.56 | 3.59 |

Place Dependence  
a) I enjoy hiking the Appalachian Trail more than any other trail | .84 | 3.13 | 3.09 | 3.09 |
b) I get most satisfaction out of visiting this trail when visiting any other trail | .92 | 2.96 | 2.86 | 2.83 |
c) Hiking here is more important than hiking in any other place | .83 | 2.15 | 2.55 | 2.65 |
d) I wouldn't substitute any other trail for the type of recreation I do here | .47 | 2.58 | 2.44 | 2.44 |
<table>
<thead>
<tr>
<th>Scale item</th>
<th>Wilderness</th>
<th>Semi-Wilderness</th>
<th>Undesignated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satisfications</td>
<td>( \lambda )</td>
<td>( \overline{M} )</td>
<td>( \overline{M} )</td>
</tr>
<tr>
<td>1. I thoroughly enjoyed my trip on the Appalachian Trail</td>
<td>( 0.43 )</td>
<td>( 4.61 )</td>
<td>( 4.57 )</td>
</tr>
<tr>
<td>2. I obtained a better trip than the one I took on the Appalachian Trail</td>
<td>( 0.54 )</td>
<td>( 7.05 )</td>
<td>( 3.95 )</td>
</tr>
<tr>
<td>3. My trip on the Appalachian Trail was well worth the money I spent on it</td>
<td>( 0.36 )</td>
<td>( 4.11 )</td>
<td>( 4.17 )</td>
</tr>
<tr>
<td>4. I do not believe I have any regrets about like this trip on the Appalachian Trail</td>
<td>( 4.55 )</td>
<td>( 4.51 )</td>
<td>( 4.47 )</td>
</tr>
<tr>
<td>5. We would like to know how satisfied you were with your hike on the Appalachian Trail</td>
<td>( 0.31 )</td>
<td>( 8.78 )</td>
<td>( 8.54 )</td>
</tr>
</tbody>
</table>

Notes:
- Measures using a Likert-type format where 1 = "Strongly disagree" and 5 = "Strongly agree."
- All variables are ratio-coded.

model for the three groups of hikers. The use of covariance structure analysis has certain advantages over separate analyses using factor analysis and regression. It allows the researcher to: (a) simultaneously test a system of theoretical relationships involving multiple dependent variables, (b) restrict the relationships among variables to those that have been hypothesized a priori, and (c) more thoroughly investigate how well the model fits the data (e.g., through the use of residuals and goodness-of-fit indices) (Lavcar & Arnett, 2000).

Assessment of model fit was based on Steiger and Lind's (1980) Root Mean Square Error of Approximation (RMSEA), Bentler and Bonnett's (1980) Nonnorm Fit Index (NNFI), and Bentler's (1990) Comparative Fit Index (CFI). A RMSEA value less than .08 is said to indicate an acceptable model fit (Hu & Bentler, 1995; MacCallum, Browne, & Sugawara, 1996) and NFI and CFI values over .90 also indicate acceptable model fit. While it has been demonstrated that the chi-square test of significance is overly sensitive to sample size and thus, not a good indicator of overall model fit when using large samples, the use of the statistic to test model respecification is still considered appropriate (Byrne, 1998).
## Results

### Behavioural Profile

The average time spent by visitors along the AT was slightly less than two days, ranging between 1.36 days for wilderness hikers to 1.73 days for undeveloped recreation area hikers (see Table 2). Average group size ranged from slightly above three people (3.05) for wilderness hikers to slightly less than four people (3.14) for undeveloped recreation area hikers. The composition of hikers' groups varied by setting. For wilderness hikers, respondents were more inclined to report hiking on their own (30.49%), with friends (37.3%), and with family (29.27). For semi-wilderness and undeveloped recreation area users, however, most respondents indicated hiking with friends (41.35%) and 39.9%, respectively) or family (34.72% and 35.25%, respectively) only. For wilderness hikers, the most popular activities were "day hiking/walking" (65.37%), "backpacking" (78.05%), and "viewing scenery" (100%). For semi-wilderness and undeveloped recreation area users, the most popular activities were "day hiking/walking" (90.55% and 98.22%, respectively) and "viewing scenery" (98.22% and 100.0%, respectively).

### Testing the Hypothesized Model

The analysis we conducted to test our hypothesized model across the three groups is referred to as invariance testing (Byrne, 1998). Before testing our hypothesized model concurrently across the three groups, we first needed to be sure that our hypothesized model fit each of the groups satisfactorily; that is, establish a baseline model (Byrne, 1998; Byrne, Shavelson, & Muthén, 1989). The a priori structure of the measurement component of the model posited that each manifest variable had a nonzero factor loading on only the factor it is hypothesized to measure, covariance among exogenous concepts was freely estimated, and the uniqueness associated with each measured variable was uncorrelated. The measurement model was respected after it was observed that model fit could be significantly improved by permitting errors among several manifest variables to correlate (see Figure 1). This decision was based on the similarity in item wording, questionnaire format, and level of measurement. For the structural model, three endogenous variables (i.e., place identity, place dependence, and satisfaction) were predicted by three exogenous variables (attraction, centrality, and self expression). Additionally, place identity and place dependence were expected to predict satisfaction. Covariance was permitted among exogenous and endogenous variables, but not between. Fit indices for each of the groups

### Table 1: Results of Co-variance Structure Analyses

<table>
<thead>
<tr>
<th>Method</th>
<th>N</th>
<th>RES</th>
<th>SRMR</th>
<th>RMSEA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Likelihood Estimation</td>
<td>87</td>
<td>0.03</td>
<td>0.05</td>
<td>0.03</td>
</tr>
</tbody>
</table>

Note: RES = Relative Standardized Root Mean Squared Error; SRMR = Standardized Root Mean Residual; RMSEA = Root Mean Square Error of Approximation.
Table 2: Visitor Characteristics

<table>
<thead>
<tr>
<th></th>
<th>Wilderness (n=82)</th>
<th>Semi-Wilderness (n=161)</th>
<th>Underdeveloped (n=278)</th>
</tr>
</thead>
<tbody>
<tr>
<td>How long was your trip? (days)</td>
<td>1.96</td>
<td>1.85</td>
<td>1.73</td>
</tr>
<tr>
<td>Including yourself, how many people were in your group?</td>
<td>3.05</td>
<td>3.23</td>
<td>3.84</td>
</tr>
<tr>
<td>Which of the following best describes the composition of your group? (%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alone</td>
<td>38.49</td>
<td>37.29</td>
<td>17.27</td>
</tr>
<tr>
<td>Family</td>
<td>28.27</td>
<td>34.74</td>
<td>37.25</td>
</tr>
<tr>
<td>Friends</td>
<td>39.02</td>
<td>42.35</td>
<td>39.93</td>
</tr>
<tr>
<td>Family and friends</td>
<td>22.60</td>
<td>9.63</td>
<td>12.23</td>
</tr>
<tr>
<td>Organized group (club or other organization)</td>
<td>5.54</td>
<td>7.13</td>
<td>15.42</td>
</tr>
<tr>
<td>Commercial group (group of people who paid a fee to participate in the trip)</td>
<td>9.0</td>
<td>0.3</td>
<td>0.6</td>
</tr>
<tr>
<td>Activities engaged in (%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Day hiking/Walking</td>
<td>95.77</td>
<td>39.15</td>
<td>95.12</td>
</tr>
<tr>
<td>Backpacking</td>
<td>76.06</td>
<td>43.65</td>
<td>72.41</td>
</tr>
<tr>
<td>Camping</td>
<td>36.10</td>
<td>41.85</td>
<td>37.41</td>
</tr>
<tr>
<td>Viewing scenery</td>
<td>100.00</td>
<td>98.22</td>
<td>100.0</td>
</tr>
<tr>
<td>Fishing</td>
<td>63.90</td>
<td>37.92</td>
<td>42.45</td>
</tr>
<tr>
<td>Hunting</td>
<td>0.00</td>
<td>0.0</td>
<td>2.0</td>
</tr>
<tr>
<td>Photography</td>
<td>6.19</td>
<td>2.14</td>
<td>2.14</td>
</tr>
<tr>
<td>Nature study</td>
<td>46.12</td>
<td>48.82</td>
<td>53.24</td>
</tr>
<tr>
<td>Jogging/Trail running</td>
<td>4.13</td>
<td>20.46</td>
<td>14.52</td>
</tr>
</tbody>
</table>

we reported in the top half of Table 3. These results indicate that, overall, the model adequately fit the data for each of the groups (Wilderness: \( \chi^2 = 433.38, df = 303, RMSEA = .063, CFI = .90, NFI = .74 \), semi-wilderness: \( \chi^2 = 762.16, df = 303, RMSEA = .056, CFI = .95, NFI = .92 \); Underdeveloped recreation area: \( \chi^2 = 638.51, df = 303, RMSEA = .055, CFI = .93, NFI = .88 \).

Boulet (1989) noted that testing for comparability across groups is a matter of degree in that the researcher decides which parameters should be tested for equality and in what order these tests should be
Table 3
Summary of Tests for Invariance

<table>
<thead>
<tr>
<th>Model</th>
<th>χ²</th>
<th>df</th>
<th>Δχ²</th>
<th>Δdf</th>
<th>RMSEA</th>
<th>CFI</th>
<th>NFI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual Models</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wilderness</td>
<td>433.58</td>
<td>322</td>
<td>0.63</td>
<td>0.00</td>
<td>0.90</td>
<td>0.74</td>
<td></td>
</tr>
<tr>
<td>semi-wilderness</td>
<td>762.18</td>
<td>303</td>
<td>0.09</td>
<td>0.00</td>
<td>0.92</td>
<td>0.92</td>
<td></td>
</tr>
<tr>
<td>Undeveloped recreation area</td>
<td>638.51</td>
<td>303</td>
<td>0.58</td>
<td>0.00</td>
<td>0.93</td>
<td>0.88</td>
<td></td>
</tr>
</tbody>
</table>

Tests of Invariance across Groups

| Equality of structure (items) | 263.88 | 909 | 0.05 | 0.00 | 0.93 | 0.89 |
| Equality of scaling (factor loadings) | 2325.27 | 951 | 61.39** | 42 | 0.58 | 0.93 | 0.89 |
| Equality of variance/ covariance | 2356.95 | 965 | 25.37 | 18 | 0.58 | 0.93 | 0.88 |
| Equality of structural coefficients (betas) | 2564.20 | 987 | 27.00 | 22 | 0.58 | 0.93 | 0.88 |

*All factor loadings were held invariant across groups except for the loadings on the item, "Hiking is pleasurable," and "I do not want to have any more trips like that trip on the Appalachian Trail."** p < .01.

These results indicate that, overall, each of the groups (Wilderness, semi-wilderness, undeveloped recreation area) have similar patterns of factor loadings on the three factors: activity involvement, place attachment, and the single factor for satisfaction across groups. However, the factor loadings differ slightly across groups, indicating that the hierarchy of invariance was not fully supported. The tests of invariance were conducted using the chi-square difference test (Δχ²), and the results indicated that the factor loadings were significantly different across groups. The RMSEA values were less than 0.05, indicating a good fit of the model to the data. The CFI and NFI values were also close to 1.0, indicating a good fit of the model to the data. The results suggest that the model is a good representation of the data, and that the hierarchy of invariance holds across groups.

The tests of invariance are based on the similarity of each group's covariance structure. Beginning with the examination of equal structure, subsequent tests become increasingly restrictive. That is, constraints are placed on the tested model that impose equality across groups. After each test, goodness-of-fit indices are inspected to observe the effect of the imposed constraint. If, after the hierarchy of tests, no significant differences have been observed, we can conclude that the effect of perceived setting type had no effect on the relationships hypothesized in the model.
In testing for equality of structure, the pattern of fixed and free parameters was consistent with that specified in the hypothesized model depicted in Figure 3. This first test examined the multitrait of the imposed factor structure for the three groups of hikers: three dimensions of activity involvement, two dimensions of place attachment, and a single factor for satisfaction. The models were hypothesized to have the same pattern of fixed and free values in the matrices containing factor loadings, structural coefficients, and the variance/covariance matrices. Non-fixed parameters were not restricted to have the same values across groups in this first test. The fit of this constrained model, shown in Table 3, was considered adequate ($\chi^2 = 2263.88$, $df = 906$, RMSEA = .069, SRMR = .066, CFI = .93, NFI = .89). This unconstrained model served as a point of comparison for the second test (equality of scaling) discussed below. The chi-square difference was used to assess support for equality constraints (Byrne, 1996).

The minimum condition for factorial invariance is the invariance of factor loadings (Marsh & Grayson, 1990). The fit of the model that required all factor loadings to be the same (equality of scaling) was compared with the fit of the model that did not require this invariance (equality of structure). The chi-square difference test (Byrne, 1998) indicated significantly worse fit ($\Delta \chi^2 = 61.39$, $\Delta df = 42$), suggesting that there was variation in the matrix in which terms were loading on their designated factors. Subsequent tests of each parameter in the lambda matrix indicated that all elements could be constrained to be equal except for the loadings on "hiking is pleasurable" ($\lambda_{25}$) and "I do not want to have any more trips like that trip on the Appalachian Trail" ($\lambda_{27}$).

The third test required holding factor variance/covariances to be invariant across groups (equality of variance/covariances). The fit of this model was compared to the fit of the final model tested above (equality of scaling). The chi-square difference test (Byrne, 1998) did not indicate significantly worse fit ($\Delta \chi^2 = 25.37$, $\Delta df = 18$). This test indicated that the variance/covariances among latent factors was not influenced by perceived setting type.

For the final test, the same procedure described above was used to test for invariant beta weights. Model fit was compared with the fit indices from the model tested above (equality of variance/covariances), and results indicated this constraint did not significantly impair the model’s fit ($\Delta \chi^2 = 27.39$, $\Delta df = 22$). Consequently the strength and directionality of the beta weights was held to be equal for all groups. Thus, these tests of invariance do not support our hypothesis suggesting that perceived setting type would influence the effect of involvement
The pattern of fixed and free parameters in the hypothesized model mimics the suitability of the paths of the research design, three dimensions of place attachment, and a single hypothesized latent variable in the correlation matrices. To assess the same value across unconstrained model, shown in 2263.88, df = 909, RMSEA = .19. This unconstrained model second test (equality of scaling) was used to assess support for the invariance of the invariance of the 1:1 ratio. The fit of the model that required this invariance (equality-of-scaling test) (Byrne, 1999) indicated that "I do want to have any fixed parameters", and "I do want to have an invariant" (2012). The fit of this model was tested above (equality test) (Byrne, 1998) did not indicate a significant difference. This test indicated that the invariance was not influenced by the model described above was used to fit the model with the set of variance/covariance, did not significantly impair the results. The support for the hypothesis suggests that the effect of involvement and place attachment on hikers' satisfaction. While the test of invariant factor loadings indicated that there were differences in the manner in which two observed variables were related to their underlying constructs, the tests of invariant variances/covariances and beta weights indicated that the groups did not differ across these parameters.

**Relationships between Involvement, Place Attachment and Satisfaction**

The results of the final structural model reported in Table 4 indicate that for all groups; (a) place identity was predicted by centrality (β = .17, t = 2.97) and self-expression (β = .29, t = 2.53) only; (b) no facet of activity involvement significantly affected place dependence; and (c) satisfaction was predicted by attraction (β = .28, t = 3.04) and place identity (β = .20, t = 3.13) only. While centrality and self expression accounted for 19% of the variation in place identity for all groups, the variation accounted for by attraction and place identity in satisfaction was highest for wilderness visitors (R² = .16) and lowest for visitors to the undeveloped recreation area (R² = .08).

<table>
<thead>
<tr>
<th>Table 4</th>
<th>Structural Model Analysis</th>
<th>R²: Total Coefficient of Determination</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct Effects</td>
<td>β</td>
<td>t-value</td>
</tr>
<tr>
<td><strong>Place Identity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>β₀, Attraction—Place Identity</td>
<td>.09</td>
<td>0.96</td>
</tr>
<tr>
<td>β₀, Centrality—Place Identity</td>
<td>.17</td>
<td>2.97*</td>
</tr>
<tr>
<td>β₀, Self Expression—Place Identity</td>
<td>.21</td>
<td>2.53*</td>
</tr>
<tr>
<td><strong>Place Dependence</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>β₀, Attraction—Place Dependence</td>
<td>-.05</td>
<td>-.53</td>
</tr>
<tr>
<td>β₀, Centrality—Place Dependence</td>
<td>.05</td>
<td>.77</td>
</tr>
<tr>
<td>β₀, Self Expression—Place Dependence</td>
<td>.13</td>
<td>1.25</td>
</tr>
<tr>
<td><strong>Satisfaction</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>β₀, Attraction—Satisfaction</td>
<td>.38</td>
<td>3.04*</td>
</tr>
<tr>
<td>β₀, Centrality—Satisfaction</td>
<td>-.05</td>
<td>-.87</td>
</tr>
<tr>
<td>β₀, Self Expression—Satisfaction</td>
<td>-.03</td>
<td>-26</td>
</tr>
<tr>
<td>β₀, Place Identity—Satisfaction</td>
<td>.20</td>
<td>3.13*</td>
</tr>
<tr>
<td>β₀, Place Dependence—Satisfaction</td>
<td>.01</td>
<td>.13</td>
</tr>
</tbody>
</table>

Note: W = Developed, S = semi-developed, and U = Undeveloped recreation area.

* Statistically significant at the .05 level.
Discussion
These results offered only partial support for our hypothesized model, suggesting that involvement and place attachment would have a significant and positive effect on visitor satisfaction. It was shown that only the attraction dimension of activity involvement and the place dependence dimension of place attachment were significant predictors of satisfaction. Additionally, contrary to our hypothesis that the effect of activity involvement and place attachment on satisfaction would increase congruently with respondents' perceptions of wilderness-like attributes, the effect of attraction and place identity on satisfaction was consistent for all bikers regardless of the type of setting visited.

While these findings offer only limited support for our hypothesized model, they do offer support for our conclusion that intrinsic qualities associated with activities and settings can be a source of satisfaction alone. The usefulness of the involvement and place attachment constructs is that they reveal some of these intrinsic elements. In this study, it was shown that the attraction component, which is a combination of items measuring activity importance and pleasure derived from participation in the activity, was predictive of visitor satisfaction. This suggests that for bikers along the AT, the hedonic qualities of the experience were an important source of satisfaction. It was also observed that place identity, the connection between the self and the setting, was predictive of satisfaction, given that place identity is comprised of items measuring respondents' emotional or affective bond with the setting, it appears that the opportunity to experience the setting was also a source of satisfaction.

Although the variance tests indicated that there were no significant differences among the groups with regard to the effect of attraction and place identity on satisfaction, the variance accounted for by these predictors is worth noting. For wilderness bikers, attraction and place identity accounted 16% of the variation in satisfaction compared with 11% and 8% for semi-wilderness and undeveloped recreation area bikers, respectively. It appears that for wilderness bikers, in particular, the opportunity to enjoy the activity and the setting constitutes a notable portion of their satisfaction with their visit along the AT.

Attempts to translate these findings into "concrete" implications for management and practice are complicated by two issues. First, for activity involvement, the level of measurement used in McHerron and Pigram's (1992) involvement scale provides only an abstract overview of the motivations that underlie respondents' activity involvement. Scales measuring motivations, such as those developed by Driver and associates...
Support for our hypothesized model attachment would have a significant influence. It was shown that only the presence and the place dependence of the satisfaction are significant predictors of satisfaction. The effect of activity involvement would increase congruently with less like attributes, the effect of identity was consistent for all hikers.

Support for our hypothesized intention that intrinsic qualities can be a source of satisfaction and place attachment constructs are elements. In this study, it was observed that intrinsic qualities were derived from participation in insatiation. This suggests that factors of the experience were also observed that place identity, setting, was predictive of satisfaction, and thus we derived one source, measuring an effect of the setting. It appears that was also a source of satisfaction. A mathematical model of significant life experiences such as a favorite playground, schoolyard, or college campus was the object of place identity (Hermitt, Bixler, & Backlund, 2002). Kyle, (2001). And finally, it has been observed that activity association was noted to be understood concerning the link between setting attributes and place identity. We suggest that for place identity to be effective to managers, investigations should continue to explore the connection between setting attributes and place identity.

Our use of McIntyre and Pigram's (1992) measure of leisure involvement did not include measures of risk that were originally included in the scale developed by McInerney and Pigram (1985) and from which the McIntyre and Pigram measure was developed. In a review of the leisure involvement literature, Havitz and Dimanche (1997) noted that the risk items had performed least consistently. They stated that, in their current
form, the risk items may not be examining the type(s) of risk that often underlie many leisure experiences. Laurenti and Kapferer suggested two forms of risk: (a) risk probability, which is the perceived risk associated with the probability that the purchase decision is likely to have a negative outcome, and (b) risk consequence, which is the perceived risk associated with the consequences of a poor purchase decision. In addition (or alternatively) to these dimensions of risk, Havitz and Dimsche suggested that leisure researchers ought to consider other forms of risk that may also be inherent in leisure experiences. While progress has been made in understanding risk in the context of adventure recreation (Schuett, 1993), other social and psychological forms of risk have yet to receive much attention in the literature. Greenwald's (1982) review of the literature on ego-involvement provides some insight and direction for future research in this regard. In his review, Greenwald observed that psychologists' attempts to activate ego attitudes fell within three categories, two of which have implications for understanding social and psychological risk. His first category, termed "impression management," described the concern aroused within individuals when their performance on a given task was open to public scrutiny. Thus, in the context of understanding social risk in leisure contexts, measures would examine psychological outcomes associated with potential success or failure on given tasks for experiences shared with others. In his second category, termed "self-image management," Greenwald described another form of ego arousal where the individual is concerned about their own performance on a given task. In this context, rather than expressing concern about others' evaluations of the self, the individual self-evaluates. Thus, in leisure contexts, measures would examine issues related to self-esteem during or after the experience. While much remains to be understood regarding these forms of risk in the context of leisure behaviour, there is a considerable body of literature supporting their inclusion in the operation of leisure involvement. Given that these forms of risk are more situational and most leisure involvement research has focused on involvement's enduring properties, this remains a fertile area for continued investigation.

While it is difficult for managers of resources such as the AT to increase visitors' level of involvement with activities that can be enjoyed within the settings they manage, Williams and Stewart (1998) recently proposed several ideas that managers can use to incorporate the symbolic and emotional meanings that humans ascribe to natural settings. First, they advocated the use of local or indigenous place names for specific
settings. They suggested that knowing and using common or traditional place names "signals that managers respect the ties people have to a place" (p. 21). They also advocated communicating management plans in locally recognized, place-specific terms. The third issue raised by Williams and Stewart concerns the politics of setting management. They suggested that managers should attempt to understand the local politics for each setting. This will often require listening to a number of stakeholders who often have conflicting preferences. For resources like the AT, which transcend political and social boundaries, the need for localized management becomes increasingly important. Finally, Williams and Stewart (1995) suggested that managers should "pay close attention to places that have special but different meanings to different groups" (p. 22). They used the example of the conflict in meanings associated with Devil's Tower National Monument; Native Americans viewed the area as a sacred site, whereas rock climbers viewed the site as an outstanding recreational opportunity.

These results also highlight some interesting theoretical issues. From a social judgment theory perspective, which has guided much of the literature's understanding of involvement and place attachment's effects, it could be interpreted that these findings run contrary to the tenets proposed by the theory (Sherif & Hovland, 1961). From this perspective, increased involvement or attachment should lead to more specific needs (i.e., narrower latitudes of acceptance) related to experience and setting conditions. Thus, as involvement or place attachment increases, the likelihood that experience and setting attributes would be considered acceptable should decrease. These findings would indicate that this is not necessarily true. Alternately, as noted by one reviewer, the more involved one becomes in an activity, the more likely that engagement in the activity is likely to be satisfying. Research on specialization tends to support this idea. A third explanation, one that distinguishes leisure experiences and the leisure literature from many consumptive experiences and much of the consumer literature, suggests that because leisure experiences are often freely chosen and intrinsically inspired, it is likely that most leisure experiences will be satisfying. A body of literature supports this notion (Drotin et al., 1990; Dwyer, 1997; LaPage & Bevins, 1981; O'Leary, 1962; Vasse, Donnelly, & Williamson, 1991).

These data also support earlier work (Bryce & Kersten, 2000; Moore & Graefe, 1994) suggesting that involvement with activities leads to attachment to the settings in which the activities occur. In particular, we observed the influence of centrality and self expression on place iden-
tity. Respondents' emotional bond with the setting was influenced by their perception that hiking occupied a central role in their lives and their perception that hiking was expressive of their values. In comparing these data with data collected from boaters along the South Fork of the American River in California and anglers from New England, we observed a similar pattern of results (Kyle et al., 2004). For the boaters, 44% of the variance in place identity was accounted for by self expression and centrality whereas centrally accounted for 14% of the variance in place identity for anglers (place dependence was also predicted by attraction). Clearly, further work is required. Overall, it appears that there is a relatively strong connection between centrality, self expression, and place identity.

Given that place dependence exemplifies the instrumental value ascribed to the setting by recreationists for its ability to facilitate specific leisure experiences, it is somewhat surprising not to see a stronger link between leisure involvement and this component of place attachment. The means for the place dependence items reported in Table 1 indicate that respondents did not view the AT as unique in its ability to facilitate hiking-related experiences. We observed similar findings in boating and angling data sets. Thus, recreationists' emotional bond to the setting appears to best expressT—place bonds in recreational contexts. We feel that this remains a fertile area for investigation, particularly within the context of community leisure service contexts. For the most part, place attachment research in the leisure literature has been the preserve of outdoor recreation researchers. Do recreationists' form attachments to community facilities? What is the role of community leisure services in facilitating community attachment and engagement?

Finally, it is important to note that this study was primarily concerned with two subjective elements of the leisure experience and their effect on visitor satisfaction. It is acknowledged that other subjective elements (e.g., personal suitability, mood, perceived convenience, etc.) and contextual factors (e.g., setting conditions, use density, social group composition and dynamic, etc.) also have bearing on satisfaction. We also acknowledge that our measure of perceived setting type is subjective and may not necessarily be reflective of the actual condition encountered.

Conclusion

The purpose of this investigation was to examine the relationships between leisure involvement, place attachment, and leisure satisfaction. We also examined the effect of perceived setting type (wilderness, semi-wilderness, and underdeveloped recreation area) on these relationships.
Our results indicated that place attachment was influenced by leisure involvement. Specifically, place identity was predicted by the centrality and self-expression dimensions of involvement. Further, leisure satisfaction was predicted by the attraction dimension of involvement and the place identity dimension of place attachment. While the relationships among these constructs was shown to be consistent across all setting types, the variance accounted for by place identity was stronger for wilderness hikers. While previous investigations, operating within an expectancy-value framework, have focused on recreationists' evaluations of experience and setting attributes, these results offer support for the idea that the opportunity to enjoy activities and setting alone may also be sources of satisfaction. Given that the involvement construct provides insight into the motivational properties underlying recreationists' engagement in specific activities and the place attachment construct provides insight on the meanings recreationists ascribe to specific environments, their incorporation in models predicting leisure satisfaction extends our understanding of the issues underlying this managerial goal.

Acknowledgment

We would also like to thank Rita Hennessy from the National Park Service for her assistance throughout the conduct of the study.

Notes

1 A purchase environment is the setting in which a purchase is made, e.g., supermarket.

2 One exception, however, is provided by Wellman, Roggebruck, and Smith (1982). They observed that for a sample of white water recreationists throughout Virginia, low and high specialists did not differ with regard to their attitudes toward deprecative behavior.

3 See Wellman, Roggebruck, and Smith (1982) for notable exception.

4 No non-response bias was conducted. This can be considered a limitation. It is plausible that low-involved or low-attached respondents may be less inclined to respond to the survey and subsequently affected the variation (or inferred) within the sample.

5 A potential limitation of this approach, however, is that we may be eliminating the most involved or attached respondents from our analysis. Given that we were interested in examining the effect of perceived setting type on the relationship between involvement and place attachment, we felt that we needed to restrict the potential for respondents to have been exposed to a diverse range of setting types.

6 NFI and CFI values range from 0 to 1.0.

7 For a more detailed discussion of invariance testing, see Byrne, 1998.

8 The invariance of relations among second-order constructs was not substantively relevant to the study's purpose and therefore was not included in our invariance testing procedures.
9. Wiliamson and Roggenbuck's (1985) measure of place attachment evolved from Laurent and Kagefere's (1985) conceptualization of involvement. Consequently, social judgment theory should provide a sound conceptual framework for understanding the effects of both constructs.

References


place attachment evolved from Lex- 

Driver, E., & Toucher, R. (1970). Toward a behavioral interpretation of recre- ational engagements with implications for planning in Elements of out- 


