EXAMINING THE RELATIONSHIP OF PLACE ATTACHMENT WITH PRO-ENVIRONMENTAL INTENTIONS

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Abstract.—Place attachment, the emotional, functional, and cognitive bond that an individual has with a specific setting may play a role in an individual's choice to engage in environmentally-responsible behavior. This is particularly true for behaviors which directly benefit the place that the individual has a positive attachment with. This study examines the relationship between place attachment and pro-environment behavioral intentions. Utilizing Likert-type scales to measure these phenomena, this study found place attachment to be a strong and positive predictor of place-specific pro-environmental intentions. Additionally, place attachment positively predicted individuals' planned engagement in environmentally-responsible behaviors associated with their daily routines (e.g., recycling or investing in green companies). A causal relationship between place attachment and place-specific and general pro-environmental behaviors cannot be confirmed because of the cross-sectional nature of this study. Further research using longitudinal and experimental research designs are called for.

1.0 BACKGROUND & OBJECTIVES

This paper describes a study that investigates how the relationships or attachments people have with particular places, settings that have meaning and value to individuals, may affect how individuals make choices about environmental actions and give practitioners a greater understanding of how to encourage pro-environmental behavior.

Pro-environmental behaviour can be defined as the action of an individual or group that advocates the sustainable or diminished use of natural resources (Sivek & Hungerford 1989/1990). Place attachment is a bond with a setting (Low & Altman 1992). Place theorists speculate that individuals who are emotionally, cognitively, or functionally attached to a place will act to protect that place (Tuan 1997, Relph 1976). Empirical research has shown this is true in several different contexts. These settings include neighbourhoods and communities (Mesch & Manor 1998, Shumaker & Taylor 1982), parks and protected areas (Kaltenborn & Williams 2002, Walker & Chapman 2003), and recreation landscapes (Bricker & Kerstetter 2002, Kaltenborn 1998, Kyle et al. 2003, Stedman 2002, Vaske & Korbin 2001, Vorkinn & Riese 2001). An increased understanding of the link between place attachment and pro-environment behavioral intentions needs to be explored in different settings and for different groups of individuals (Stedman 2003). However, based on known theoretical and empirical research, the following relationship is proposed for a protected area leisure-based setting:

> P1. High levels of place attachment will encourage place-specific pro-environment behavioral intentions towards the place of attachment.

The relationship between these two factors may be better understood through the measurement of place-specific pro-environment behavioral intentions. These can be compared with general planned pro-environment behaviors expressed by individuals to illuminate the salience and intensity of relations between place-specific environmental behaviours and attachments.

2.0 METHODOLOGY

The study was conducted at Point Pelee National Park in 2005 in partnership with Parks Canada. A quota sample of visitors who had visited the park in the previous four years was utilized. Questionnaires were mailed to Canadian and U.S. residents. A quota sample was used to achieve adequate response from individuals that were anticipated to demonstrate different levels of place attachment to the park (e.g., first-time visitors would have a lower attachment to the park than individuals

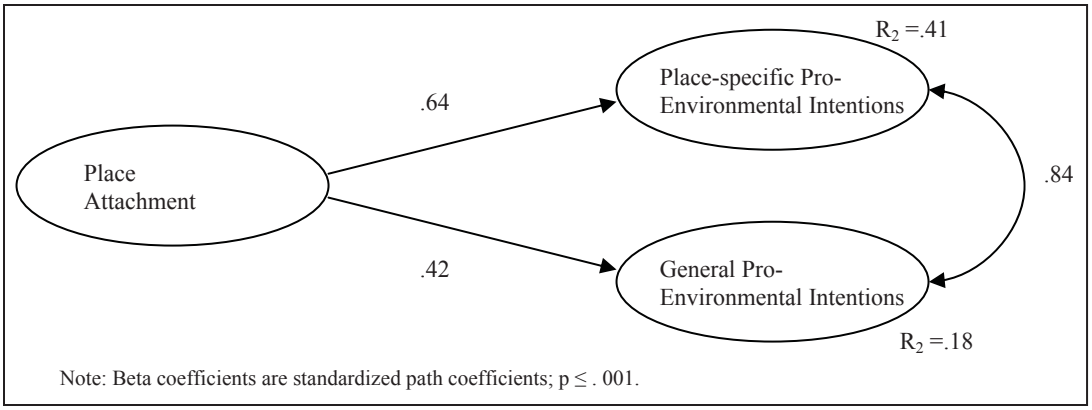

Figure 1.

who visit on a recurrent basis). To increase response rates, reminder post cards were mailed and incentives such as seasonal park passes were awarded.

Previously employed scales used to measure place attachment and pro-environmental behaviors were slightly modified and utilized to measure these two phenomena (Jorgensen & Stedman 2001, Smith-Sebato & D'Costa 1995, Stedman 2002, Vaske & Korbin 2001, Walker & Chapman 2003, Williams & Roggenbuck 1989, Williams & Vaske 2003). Sixteen items designed to measure place affect, place identity, and place dependence were selected. Twelve items designed to measure place-specific pro-environmental intentions (e.g., "Tell my friends not to feed the animals in Point Pelee N.P. or similar parks") and 12 items designed to measure general pro-environmental intentions (e.g., "Pay extra for transportation if it is environmentally-friendly [e.g., a fuel-efficient car]") were identified. All scale items were pre-tested (n = 80) and subject to peer review.

3.0 RESULTS AND DISCUSSION

A 33 percent response rate was achieved (n = 355). A non-response bias check was performed through the comparison of late versus early respondents. Late respondents are reported to share similar characteristics with non-respondents (Lindner et al. 2001). No major differences were observed between the populations. The place attachment (α = .918, 16 items) and pro-environmental behavioral intention scales (general environmental intentions: α = .848, 12 items; place-specific intentions: α = .869, 12 items) demonstrated high reliability scores. Significant correlations between aggregate measures of place attachment and place-specific pro-environmental behaviors (r = .565) and general environmental behavioral intentions (r = .328) were also found.

Structural equation modeling, utilizing Amos 5.0, was used to further explore this relationship. A structural model based on a priori theory was tested (see Figure 1). One respecification of the model was needed to achieve adequate fit: Two measurement errors associated with one of the general intentions indicators and one of the park-specific intentions indicators were correlated to achieve better fit. This correlation was integrated into the model because it also made substantive sense (i.e., both indicators share similar qualities in that they are behaviors that are more difficult for individuals to engage in, e.g., participation in environmental protests or public land planning meeetings). The final model fit was characterized by the following indices: x_M^2 = 30.342, df = 16, $p \leq .016$; CMIN/df = 1.894; CFI = .990; RMSEA = .050; AIC = 86.310.

In the examination of the relationship between the study's main constructs, place attachment was more strongly predictive of place-specific pro-environmental intentions (ß = .64, $p \leq .001$, R_2 = .41) than of general pro-environment behavioral intentions (ß = .42, $p \leq .001$, R_2 = .18). Place attachment was a statistically significant and positive predictor of both forms of pro-environmental intentions. In other words, place attachment may be an important factor in fostering individuals' decisions to engage in environmentally-responsible behavior. This is especially true for place-related behaviors.

However, this study may also document the presence of a "carry-over" effect in that positive bonds with specific places, especially nature-based settings, may encourage individuals to engage in pro-environmental behavior in their everyday lives. In short, as individuals build attachments with particular nature-based settings, they may in turn adopt this as part of their identity. Their place-based identity as a lover of a particular natural context may translate to a supporter of nature in general, and in turn could foster pro-environmental attitudes, intentions, and behaviors in their everyday lives (Vaske & Korbin, 2001).

The limitation with this study is that it is cross-sectional in nature; it documents one population at one time. As a result, the exact causes of pro-environmental intentions cannot be proven. It may only be speculated that place attachment, based on the strong relationship that it shares with general and place-specific pro-environmental behaviors, may play a role in encouraging pro-environmental behavior. The findings of this study appear to support similar results documented in related place-based research that focuses on place attachment and environmental concerns, attitudes, and behaviors (Stedman 2000, Walker & Chapman 2003, Vaske & Korbin 2001, Vorkinn & Riese 2001).

Much more work needs to be done to verify this relationship; in particular, longitudinal research which measures the evolution of an individual's choice to engage in pro-environmental behavior based on visitation to parks is needed. Pre- and post-experimental research design is one research approach which should be utilized to investigate this.

The attachments that individuals have for specific parks and natural spaces are an important phenomenon that park and conservation agencies need to understand. Place attachment is especially important because of its potential role in fostering park advocacy and citizen support of heritage conservation efforts, as well as anticipating points of conflict regarding the management of natural spaces and place.

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