

PLACE ATTACHMENT AND PERCEPTIONS OF BENEFITS GENERATED BY THE FUTURE TIOUGHNIOGA RIVER TRAIL PROJECT

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Abstract

This study examined the relationship between place attachment and residency, past trail usage behavior, and perception of the benefits of a proposed river trail in upstate New York. A telephone or door-to-door survey was administered to 527 residents. Results showed that overall, residents felt a sense of place attachment with the Tioughnioga River (mean=8.7 out of 12), and perceived positive recreational and environmental benefits to the proposed river trail (mean=3.27 and 3.20 respectively, on a 4-point scale), but less economic benefits (mean=2.72). Miles residing from the river and past trail usage were significantly related to a sense of place attachment. However, years of residency was not related to place attachment. Lastly, there was a relationship between place attachment and perceived benefits of the proposed river trail, with those who perceived the highest benefits scoring highest in place attachment. Managers can use these results as they plan new recreation resource developments.

1.0 Introduction

1.1 Background

According to Kyle, Graefe, Manning, and Bacon (2003), place attachment is defined as “the extent to which an individual values or identifies with a particular environmental setting” (p. 250). Williams and Vaske (2003) further define place attachment as consisting of place dependence, or functional attachment, and place identity, or emotional attachment, to specific natural resources. According to Williams and Vaske (2003), place dependence reflects the importance of an environment to help one meet goals or pursue a particular activity. Place identity reflects the symbolic importance of a place in one’s self-identity and affective valuing. Stokowski (2002) further asserts that place

attachment refers not only to a geographic feature or location, but to the social and cultural values that are sustained in the language, history, and culture of a community of people.

Studies focusing on place attachment have shown relationships between place attachment and several other variables, including management preferences and user behavior (Bricker & Kersetter 2000; Kyle, Bricker, Graefe, & Wickham 2004; Williams, McDonald, Riden, & Uysal 1995), leisure satisfaction and demand (Wickham & Graefe 2002), and activity involvement (Kyle et al. 2003; Moore & Graefe 1994). Place attachment can have significant implications for recreation resource planners and managers (Moore & Graefe 1994; Williams 2002), ranging from support for new developments to managing user conflicts in existing areas.

This study investigated place attachment in relation to a newly proposed recreation development, the Tioughnioga River Trail Project. This land- and water-based trail will revitalize the Tioughnioga River along its 30-mile corridor in upstate New York and will accommodate hiking, biking, fishing, skiing, canoeing, kayaking, and other activities. The overall purpose of this project was to assess the preferences and intended use of the river trail by Cortland County residents (Todd, Anderson, & 601 graduate students 2003). Specifically, this part of the study investigated the relationship of place attachment with several variables. If Cortland County residents experienced high levels of place attachment, more positive support for the river trail project could evolve.

1.2 Objectives

This study had three objectives: 1) to examine the relationship between place attachment and residency; 2) to investigate the association of place attachment and actual behavior of past trail usage; and 3) to uncover differences in perceived benefits of the future Tioughnioga River Trail among residents with diverse levels of place attachment. It was hypothesized that number of years lived in Cortland County would be

positively correlated with place attachment, while distance from the river would be negatively correlated. It was also predicted that those with higher place attachment scores would be more likely to have used recreational trails in the past. Finally, it was hypothesized that residents with stronger place attachment scores would perceive greater potential levels of recreational, environmental, and economic benefits from the future Tioughnioga River Trail.

2.0 Methods

2.1 Samples

All subjects for this study were drawn from Cortland County area residents over the age of 18 years. Because it was assumed that residents living very near the river may have different opinions about the trail project than those living further from the river, that population was sampled for a door-to-door survey. All other county residents were eligible to be included in a telephone survey sample.

For those living near the river, a random sample of 280 Cortland households was selected from a GIS database in the mile-wide corridor along the river and asked to complete a door-to-door survey. A systematic random sample of 1170 Cortland County residents, drawn from the telephone directory, were asked to complete a telephone survey.

2.2 Measurement

The door-to-door and telephone surveys had the same questions, but were formatted according to method of administration. Residency was measured in two ways: number of years lived in Cortland County, and number of miles from the Tioughnioga River. Past trail usage was also operationalized by two variables: whether or not respondents had ever used a trail for recreational purposes, and more specifically, whether or not they had spent free time on or near the Tioughnioga River.

A place attachment scale (Cronbach's $\alpha = .82$) was created by summing three items measured on 4-point scales (1=strongly disagree to 4=strongly agree): "The Tioughnioga River means a lot to me" (mean = 2.94), "I would spend more time on or at the Tioughnioga River if I could" (mean=3.01), and "The Tioughnioga River is

a feature I frequently take note of" (mean=2.80). Since it was important for the scale to be quick to administer, only these three items were used, but each represented slightly different aspects of place attachment. While the first item ("The Tioughnioga River means a lot to me") clearly focused on *place identity*, the second item ("I would spend more time on or at the Tioughnioga River if I could") has loaded either on *place dependence* (e.g., Bricker & Kerstetter 2000) or *emotional/symbolic attachment* (e.g., Warzecha & Lime 2001) in other studies. The third item was newly created for this project ("The Tioughnioga River is a feature I frequently take note of"), but aligns most closely with the concept of *place familiarity* (e.g., Hammitt, Backlund, & Bixler 2003). When summed, place attachment scores ranged from 3 to 12. Respondents were subsequently divided into approximate thirds so that 39 percent (203 respondents) were reclassified as having low place attachment (i.e., those with scores ranging from 3 to 8), 29 percent (150) had *medium* (a score of 9), and 32 percent (164) had *high* (scores of 10 to 12).

To measure potential benefits, three scales of three statements each were constructed. These items were derived from the benefits research literature (Godbey, Graefe, & James 1992; Leisure Information Network 1997). Respondents were asked to indicate the extent to which they believed each item would benefit themselves, their households, or their community as a result of the trail development on a 4-point scale (1=no benefit, 2=little benefit, 3=some benefit, 4=great benefit). To represent *recreational* benefits (Cronbach's $\alpha = .84$), three statements were included: an incentive to exercise, recreational opportunities, and a place to meet and do activities with others. *Environmental* benefits (Cronbach's $\alpha = .81$) statements included: protection of scenic views, environmental education and nature study, and cultural and historic preservation. *Economic* benefits statements included: tourist destination; increased economic impact to the area; and a way to link neighborhoods to shopping, work, and school. Cronbach's α was just .51 for this last scale, but significantly increased to .75 when the last item was removed; therefore, the final economic benefits scale was reduced to the first two items.

Table 1.—Place attachment (raw scores) and residency

		Place attachment (raw scores)
Number of years lived in Cortland County	<i>r</i>	-.169*
	<i>n</i>	(461)
Number of miles resided from the Ti River	<i>r</i>	-.024
	<i>n</i>	(494)

*Correlation is significant at the .05 level (2-tailed).

3.0 Results

3.1 Descriptive Results

The overall response rate for the study was 36 percent (527/1450). The door-to-door response rate was 60 percent (169/280), and the telephone survey was 30 percent (358/1170). Nearly 60 percent of the 527 respondents had lived in Cortland County for 16 years or more; distance from the river ranged from 0 to 40 miles with an average of 3.5; nearly two-thirds had used a trail for recreation in the past; and 58 percent had already used the Tioughnioga River for some sort of recreational activity. Place attachment scores ranged from 3 to 12, with a mean of 8.7. Respondents perceived the highest level of benefits of the future river trail to be recreational (the items averaged 3.27 on a 4-point scale), followed by environmental (3.20), and economic (2.72).

3.2 Hypothesis Testing

As expected, number of miles residing from the river was significantly related to place attachment, whether tested by raw place attachment scores ($r = -.17$, $p < .05$) (see Table 1) or recoded categories (i.e., those with low place attachment scores lived significantly farther away

from the river than those with medium or high place attachment [$F = 11.19$, $p < .01$]) (see Table 2 for results of one-way ANOVA followed by Scheffe's post hoc test). As also seen in Tables 1 and 2, however, number of years living in Cortland County was *not* significantly related to place attachment, resulting in only partial support for the first hypothesis.

Confirming the second hypothesis, past behavior was associated with place attachment: respondents who had used trails in the past had significantly higher raw place attachment scores than those without previous trail experience ($t = 5.32$, $p < .01$), a result echoed by Tioughnioga River users vs. nonusers ($t = 9.16$, $p < .01$) (see Table 3). Chi-square analysis (using recoded categories of place attachment) confirmed these findings, with a higher percentage of low place attachment respondents being nonusers of trails and the river, and a higher percentage of high place attachment respondents being trail/river users (Chi-square = 20.60 for trail use and 59.52 for river use, $p < .01$) (see Tables 4 and 5).

Full support was found for the third hypothesis. Raw place attachment scores were significantly correlated to recreational, environmental, and economic benefits ($r = .43$, $.42$, and $.37$, $p < .01$, respectively) (see Table 6). Using one-way ANOVA followed by Scheffe's post hoc test, respondents with re-coded low, medium, and high place attachment scores all differed significantly from each other, such that the lowest levels of benefit were perceived by respondents with low place attachment and the highest levels were perceived by those with high place attachment ($F = 37.00$ for recreational, 31.77 for

Table 2.—Place attachment (recoded categories) and residency

Residency item	Total (<i>n</i> =494)	Place attachment (recoded categories)			F-value	p-value
		Low (<i>n</i> =189)	Medium (<i>n</i> =145)	High (<i>n</i> =160)		
Number of years lived in Cortland County	28.86	28.32	29.64	28.79	.14	.871
Number of miles resided from the Ti River	3.52	4.94 ^a	2.52 ^b	2.69 ^b	11.19	.000

Mean values with different superscripts are significantly different at the .01 level.

Table 3.—Past experience by place attachment (raw scores)

	Used any trail for recreation				Used Ti River for recreation			
	Yes (n=343)	No (n=171)	t-value	p-value	Yes (n=301)	No (n=213)	t-value	p-value
Place Attachment (raw scores)	9.06	8.09	5.324	.000	9.37	7.85	9.159	.000

Values are mean scores on a summed scale of three items, ranging from 3 (least attachment) to 12 (greatest attachment).

Table 4.—Used any trail by place attachment (recoded categories)

		Place Attachment (recoded categories)				
			Low	Medium	High	Total
Used any trail for recreation	Yes	n	115	99	129	343
		%	(56.7)	(66.9)	(79.1)	(66.7)
	No	n	88	49	34	171
		%	(43.3)	(33.1)	(20.9)	(33.3)
	Total		203	148	163	514
						(100.0)

Chi-square = 20.602 (p<.01)

Table 5.—Used Ti River by place attachment (recoded categories)

		Place attachment (recoded categories)				
			Low	Medium	High	Total
Used Ti River for recreation	Yes	n	80	93	128	301
		%	(39.4)	(62.4)	(79.0)	(58.6)
	No	n	123	56	34	213
		%	(60.6)	(37.6)	(21.0)	(41.4)
	Total		203	149	162	514 (100.0)

Chi-square = 59.518 (p<.01)

environmental, and 27.22 for economic benefits, $p < .01$, respectively) (see Table 7).

4.0 Conclusions and Implications

Results of this study indicate that place attachment to a potential river trail is related to past trail and river use as well as proximity of residence, but not to years of residency. Those with higher place attachment are more likely to see the potential benefits of the future

river trail. Although little resistance toward the river trail was recorded, it is important for trail developers to continually communicate with residents about plans for the trail, as well as provide clear messages on the trail's benefits to the community as it is developed. Given that place attachment increased with people who were trail users, and those with higher place attachment perceived greater benefits from the trail project, it may be helpful for trail developers to plan special events that would

Table 6.—Place attachment (raw scores) and trail benefits

		Place attachment (raw scores)
Recreational benefits	<i>r</i>	.434**
	<i>n</i>	(511)
Environmental benefits	<i>r</i>	.416**
	<i>n</i>	(511)
Economic benefits	<i>r</i>	.369**
	<i>n</i>	(511)

**Correlation is significant at the .01 level (2-tailed).

bring first-time users to the river, and begin to cultivate a sense of place among them. According to Shamai (1991), place attachment develops on a continuum, with knowledge of and exposure to place being the first steps.

Respondents in the sample had lived in Cortland County a long time. As seen in other studies (McCool & Martin 1994; Smith 2002; Williams et al. 1995), some long-time residents may be resistant to change, especially if it will affect something in their environment. They may want to “keep things the way they are” and not promote a “tourist trap” being developed in their backyards. Other studies have found that newcomers tend to have a more “regional place identity” (Williams, et al. 1995) or a more “conceptual attachment” to place (Ryan 2005) than longtime residents, resulting in a more expansive view of change.

In addition, respondents were more likely to perceive potential recreational and environmental benefits, but were less likely to see economic benefits. It may be worthwhile to provide information to the public on the economic benefits realized by other communities to increase their awareness and support for the trail. By stressing that economic development along the river will be secondary to preserving the integrity of the river and its ecosystem, residents may begin to understand how the river trail will be managed to balance its many benefits.

Although residents do feel attached to the river, there was some evidence that many may take it for granted. Since the research (Moore & Graefe 1994; Smith 2002) shows that people who feel attached to a place or resource are more likely to volunteer to maintain or enhance it, or support it monetarily (Kyle, Absher, & Graefe 2003), it is important to keep people aware and engaged in the Tioughnioga River Trail project through press releases, special events, and other venues.

Lastly, it is important for managers and developers to be sensitive to the differing levels of place attachment and understand that much still needs to be learned about differences across groups, such as gender and ethnicity/race (McAvoy 2002; Virden & Walker 1999). This study did not address such differences, yet Stokowski (2002) reminds us that the “politics of place,” addressing power, access, decision-making, equity, and cultural influence, must become a part of our thinking as we continue to further understand place attachment and its use in recreation resource management.

Table 7.—Place attachment (recoded categories) and trail benefits

Benefit scale	Total (n=511)	Place attachment (recoded categories)			F-value	p-value
		Low (n=198)	Medium (n=150)	High (n=163)		
Recreational benefits	3.27	2.98 ^a	3.34 ^b	3.57 ^c	37.00	.000
Environmental benefits	3.20	2.93 ^a	3.22 ^b	3.50 ^c	31.77	.000
Economic benefits	2.72	2.45 ^a	2.71 ^b	3.05 ^c	27.22	.000

Values are mean scores on a scale ranging from 1=no benefit to 4=great benefit.

Values with different superscripts are significantly different at the .01 level.

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