

## HUMAN TERRITORIALITY: AN EXAMINATION OF A CONSTRUCT

Thomas D. Wickham

Assistant Professor, Department of Earth Sciences, 250  
University Avenue, California University of Pennsylvania,  
California, PA 15419

Harry C. Zinn

Assistant Professor of Hotel, Restaurant and Recreation  
Management, The Pennsylvania State University, 201  
Mateer Building, University Park, PA 16802

---

**Abstract:** Human territory research has generally been focused in a variety of settings including urban neighborhoods, libraries, mall parking lots, and areas around phones in public places. It refers to an intertwined system of emotions, beliefs, and behaviors that are place specific, socially and culturally influenced, and are linked to person-place transactions dealing with issues of setting management, maintenance, and expressiveness. A better understanding of human territoriality and its application in outdoor recreation settings has the potential to contribute to a more comprehensive understanding of recreation experience and conflict. Thus, the purpose of this study is to explore the nature of human territoriality and develop the construct in the context of outdoor recreation. Territoriality has been studied primarily in urban settings. In that context, territorial behaviors attempt to control not only the activities of others, but their access to a particular area. Territorial beliefs include an individual's perceptions or belief that they can control who enters a site, what goes on at the site, who should take care of a site, or the types of activities that are allowed to take place. Territorial emotions include: a positive emotional bond to a place and the condition of that site as well as the type of user that should be there, and negative emotional reactions to possible changes in conditions and users in an area. Because many of the studies on human territoriality have been in neighborhoods or other public areas like libraries or dormitories, traditional measures of territoriality have been modified in order to interpret its meaning in a natural resource environment. To test this construct in the context of outdoor recreation, we will be using data from an angler study conducted in New England. In order to determine if the construct holds together as predicted, we have used descriptive statistics for all items in the construct, inter-item correlations matrices for the scales in this study, item-total correlations testing each item against totals of each dimension, and reliability analysis using Cronbach's alpha. We have used the results of the item analysis as well as factor analysis to assess the dimensions of the construct and compare results to the conceptual structure of territoriality as developed in past research. Lastly, we have examined the territoriality construct to determine if it differs from a conceptually similar construct, place attachment, in order to test for discriminant validity.

---

## Introduction

Human territoriality is defined as the impetus of humans to establish permanent or temporary control over physical spaces (Malmberg, 1980). Human territoriality refers to an intertwined system of emotions, beliefs, and behaviors that are very place specific, socially and culturally influenced, and are linked to person-place transactions dealing with issues of setting management, maintenance, and expressiveness (Taylor, 1988). "Territoriality" is also seen as a way of examining human behavior rather than describing an actual type of behavior (Schefflen & Ashcraft, 1976). Human territoriality research has generally been conducted within the following settings: urban neighborhoods, libraries, mall parking lots and areas around phones in public places.

Human territoriality may be associated with a variety of situations in the natural environment, including conflict. Because recreation sites are often symbolic and have deep personal meaning for people, territorial models, like crowding and conflict models, stress an individual's perceived control as an important part of a satisfying experience (Zinn, 1992). Territorial functioning may cause conflict between users and managers as well as between different or similar recreational user groups. A better understanding of human territoriality and its application in outdoor recreation settings has the potential to contribute to a more comprehensive understanding of resource conflict and provide better information to deal with and manage situations as they arise (Zinn, 1992). With this knowledge and understanding, it may be possible for managers to provide a more satisfying experience.

Human territory is believed to consist of three dimensions known as territorial cognition, emotion, and behavior (Taylor, 1988). Territorial behaviors are an attempt on the individual's part to control not only the activities of others, but their access to a particular area. Specific territorial behaviors in previous research might include painting, planting shrubbery, fixing up a home, and keeping a well-maintained lawn (Taylor, 1988). An individual taking part in such activities is considered to be "marking" an area that holds a certain value to the person. Territorial beliefs include an individual's perceptions or belief of who should enter a site, what goes on at the site, who should take care of a site or the types of activities that are allowed to take place at a site (Taylor, 1988). Territorial emotions include a positive emotional bond for a place and the condition of that site as well as the type of person that should use the area, and negative emotional reactions to possible changes in conditions and users in that very same area.

In this study, human territoriality has been conceptualized as a person's attitude towards a specific place. For instance, a person will develop an attitude towards their home or perhaps (in the context of this study) a special lake where they grew up fishing with their grandfather. Researchers suggest human territoriality will exhibit a tripartite structural characteristic, consistent with many definitions of attitudes (Eagly & Chaiken, 1993; Thompson, Zanna, & Griffin, 1995). In other words, it will

be made up of cognitive (beliefs), affective (emotions), and behavioral (or behavioral tendencies) components. Another expectation from this line of research is human territoriality will function like an attitude in that a territorial response is an overall or summary evaluation of an important place. Basically, a territorial response organizes one's beliefs, emotions, and behavioral tendencies into a coherent appraisal of a special place (Eagly & Chaiken, 1993; Greenwald, 1989). This in turn includes what might be considered beliefs towards what should and should not occur in a valued place.

The purpose of this study was to explore the human territoriality construct in the context of outdoor recreation. It is postulated that territoriality may contribute to a more comprehensive understanding of recreation resource issues such as conflict, crowding and satisfaction.

### Methodology

The data for this study were obtained from a study focusing on anglers in the New England District of the U.S. Army Corps of Engineers. Anglers were specifically asked about the lakes they fish most frequently and the last lake they fished. The New England District of the U.S. Army Corps of Engineers indicated an interest in measuring the levels of importance and satisfaction concerning customer service-related issues. Their interest was driven by the desire to meet the mandate set forth by Executive Order 12962 "the Recreational Fisheries Executive Order." The executive order requires federal agencies "to the extent permitted by law and where practicable, and in cooperation with States and Tribes, improve the quantity, function, sustainable productivity, and distribution of U.S. aquatic resources for increased recreational fishing opportunities." With this in

mind, the overall study's intended purpose was to explore the nature of service quality indicators as predictors of customer satisfaction for anglers in the New England District.

### Data Collection Procedures

A multiple-method approach was used for data collection to obtain a diverse sample of anglers from the New England region. The project offices of the Corps of Engineers provided the names of groups and club representatives for Penn State researchers to contact by phone. A total of eight groups agreed to participate in a mail-out survey. Individual anglers that have participated in youth angling days (day to teach young children about fishing) and volunteered to clean up the shoreline also had their names and addresses provided to Penn State researchers. A modified Dillman multiple-mailing process was used to sample possible survey respondents. Two state bass federation organizations were also contacted and agreed to distribute surveys to club members to complete and return to Penn State University. The total sample size for this study was 176.

### Measurement

For the territoriality construct, traditional measures had to be modified for use in natural resource settings. A total of 12 items were tested to measure territoriality (Table 1). The items used in this study were developed to measure recreationists' emotions, beliefs, and behaviors towards a specific place. The items use a five-point scale with responses ranging from "strongly disagree" to "strongly agree."

**Table 1. Items Used to Measure Human Territoriality**

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
<b>Belief</b>					
Everyone should be able to use this place	1	2	3	4	5
People should be free to do whatever they want at this place	1	2	3	4	5
People who have used this place longest should have priority using it	1	2	3	4	5
Managers need to restrict use at this place	1	2	3	4	5
<b>Emotion</b>					
I have a lot of fond memories about this place	1	2	3	4	5
This place means more to me than any other place I can think of	1	2	3	4	5
I have a special connection to this place and the people that use it	1	2	3	4	5
For me, lots of other places could substitute for this one	1	2	3	4	5
<b>Behavior</b>					
I know this place better than the people who run it	1	2	3	4	5
I treat this place better than most other people that come here	1	2	3	4	5
I will (or do) bring my children to this place	1	2	3	4	5
I don't tell many people about this place	1	2	3	4	5

### Analysis

Factor analysis and Cronbach's coefficient alpha were used to test the internal dimensions of the territoriality construct in an outdoor recreation setting. The territoriality construct

was tested as a possible predictor variable of satisfaction. Lastly, the relationship between territoriality and place attachment, two similar constructs, was examined by conducting a factor analysis on items from both constructs.

All analyses were measured for significance at the .05 level.

## Results

An initial factor analysis of the 12 items in the construct identified three factors that corresponded to the hypothesized dimensions of territoriality and two items that loaded separately (Table 2). The three dimensions that factor analysis identified included territorial beliefs, emotions and behaviors. The first dimension, territorial emotions, retained all four items originally hypothesized to represent the dimension (Eigenvalue=2.67; Variance=22.26; Reliability=.69). The second dimension

representing territorial behaviors retained three of the four items predicted to represent this dimension (Eigenvalue=1.93; Variance=16.07; Reliability=.52). Lastly, the third factor determined through principle component analysis was territorial beliefs. As with the dimension representing territorial behaviors, territorial beliefs retained three of the four predicted items (Eigenvalue=1.23; Variance=10.23; Reliability=.55). The third item in factor 3 loaded high on both factors 3 and 4. Because this item is conceptually hypothesized to be in the territorial behaviors dimension and the score on factor 4 was only slightly stronger, it was believed that the item should remain in its conceptualized dimension.

**Table 2. Factor Analysis (Human Territoriality, N=176)**

Item	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
<b>Factor 1 'Territorial Emotions'</b>					
This place means more to me than any other place I can think of	<b>.737</b>	.145	-.028	-.260	.002
I have a special connection to this place and the people that use it	<b>.723</b>	.237	-.098	-.006	-.002
For me, lots of other places could substitute for this one <sup>1</sup>	<b>.687</b>	-.353	.289	.151	.295
I have a lot of fond memories about this place	<b>.668</b>	.258	-.195	.347	-.001
<b>Factor 2 'Territorial Beliefs'</b>					
I know this place better than the people who run it	.333	<b>.674</b>	-.132	-.009	.146
I treat this place better than most other people that come here	.236	<b>.671</b>	.193	.181	-.124
I don't tell many people about this place	-.137	<b>.605</b>	.178	-.295	.289
<b>Factor 3 'Territorial Behaviors'</b>					
Everyone should be able to use this place <sup>1</sup>	-.155	-.015	<b>.873</b>	-.002	-.005
Managers need to restrict use at this place	.141	.471	<b>.579</b>	.102	-.135
People who have used this place longest should have priority using it	-.029	.159	<b>.501</b>	-.508	.207
People should be free to do whatever they want at this place* <sup>1</sup>	-.083	.024	.120	.770	.232
I will (or do) bring my children to this place*	.076	.078	-.089	.119	.863
Eigenvalue	2.671	1.929	1.227	1.145	1.013
Percentage of Total Variance	22.262	16.073	10.226	9.539	8.444
Reliability (Cronbach alpha)	.689	.518	.545	-----	-----

Factor 1 Scale Mean = 3.32

Factor 2 Scale Mean = 3.09

Factor 3 Scale Mean = 2.51

\*Item in original construct not used in further analysis because of low Reliability Analysis and did not load on the final three factors in bold.

<sup>1</sup>Item reverse coded prior to analysis.

While the reliability scores for the three dimensions revealed through factor analysis were moderate to low, principle component analysis with varimax rotation found the three factors initially conceptualized in the initial model to factor together. Because territoriality is exploratory in this study, its use may provide insight into how peoples' relationships with places impact customer satisfaction and other important issues in outdoor recreation. Therefore, it is believed that testing the construct is warranted. All of these dimensions represent the pool of human territorial dimensions previously predicted to represent human territoriality.

Two items failed to load on the three hypothesized factors. These items were "People should be free to do whatever

they want at this place" and "I will (or do) bring my children to this place." Because each of these items loaded alone on a single-item factor, unrelated to the hypothesized dimensions, they were not tested as predictors of satisfaction.

Because it is theorized that territoriality research may offer a new perspective on old problems in outdoor recreation research, the next step in the analysis was to test the ability of the territoriality dimensions to predict overall satisfaction with the fishing experience (Table 3). The three dimensions (emotions, beliefs, behaviors) were tested for their relationship with overall satisfaction with the fishing experience using multiple regression analysis. The strongest predictor of overall satisfaction with the fishing

experience was territorial emotions ( $B = .385$ ;  $p < .001$ ) followed by territorial beliefs ( $B = -.148$ ;  $p < .05$ ). For the

third dimension of territoriality, territorial behaviors, the relationship was not significant.

**Table 3. Results of Multiple Regression of Human Territory Dimensions on Overall Satisfaction with Fishing Experience.**

Independent Variable	Overall Satisfaction	
	r	Beta
Territorial Belief	-.181*	-.148*
Territorial Emotion	.354**	.385***
Territorial Behavior	-.039	-.104
<i>R<sup>2</sup> Territorial Dimensions Belief, Emotion, and Behavior</i>		.167***

\*\*\* Significant at .001

\*\* Significant at .01

\* Significant at .05

The final step in the analysis included an examination of the relationship between territoriality and place attachment. This was accomplished by testing all items within the place attachment (8 items) and territoriality constructs (12 items) using factor analysis (Table 4). Factor analysis revealed that the four territorial emotion items and the eight place attachment items loaded together on the first factor (Eigenvalue = 6.15; Variance = 30.76; Reliability = .90), evidence that territorial emotions and place attachment may be related psychological constructs. Three territorial belief items (Eigenvalue = 1.65; Variance = 8.27; Reliability = .55) and three territorial behavior items (Eigenvalue = 2.07; Variance = 10.37; Reliability = .55) factored separately from the first factor and each other. Factors 4 and 5 both were comprised of single items, the same items that failed to load as expected when tested with only human territoriality items. This test of discriminant validity suggests that human territoriality and place attachment may overlap at the affective level, but provides evidence that territorial beliefs and behaviors are distinct from place attachment.

### Conclusions and Implications

The results of the study suggest that further investigation of the human territoriality construct is warranted. Analysis supported the hypothesized three-dimensional structure of human territoriality (emotions, beliefs, and behavior). This result is consistent with past research conducted in urban settings by environmental psychologists (Taylor, 1988). However, the moderate to low reliability scores for the three territorial dimensions indicate that the three dimensions will have to be reexamined and additional items

developed and tested to improve the reliability of the dimensions in the context of outdoor recreation.

The prediction of overall satisfaction with the fishing experience by territorial emotions and beliefs suggests that increasing our understanding human territorial responses in the context of outdoor recreation may improve our understanding of the outcomes of recreation experiences. As the territorial construct is refined in the future, it should be tested further as a predictor of overall satisfaction, as well as other dependant variables, such as crowding, conflict and willingness to pay.

The relationship between human territoriality and place attachment will require additional investigation. Both territorial beliefs and territorial behaviors factored separately in this analysis, indicating that there is some discriminant validity between the variables place attachment and territoriality. In contrast, territorial emotion items factored with place attachment items, suggesting they are closely related. This result, perhaps, indicates that overlap between the two constructs occurs primarily at the affective level. Additional research will be needed to refine the human territorial emotions dimension and test its relationship to place attachment.

Overall, the results of this exploratory study support additional research into the role of territoriality in outdoor recreation. The territoriality construct has the potential to help managers and researchers advance our understanding of recreationists and their outdoor experiences. Future investigations of territoriality should include the analysis of both qualitative data and quantitative data, as well as data from other settings.

**Table 4. Factor Analysis for Human Territoriality (HT) and Place Attachment (PA)**

Item	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
I get more satisfaction out of visiting this lake than from visiting any other lake (PA)	.844	.008	.004	-.009	.001
Fishing here is more important than fishing in any other place (PA)	.821	.005	.001	-.118	-.102
I enjoy fishing here more than any other lake (PA)	.790	.005	.006	-.001	.003
I am very attached to this lake (PA)	.755	.259	.001	.110	.154
This place means more to me than any other place I can think of (PA)	.709	.271	-.007	-.194	-.005
I wouldn't substitute any other lake for the type fishing I can do here (PA)	.691	-.002	.003	-.101	-.007
I identify strongly with this lake (PA)	.655	.328	.002	.182	.186
For me, lots of other places could substitute for this one (HT)	.630	-.148	.009	.372	.140
This lake means a lot to me (PA)	.579	.253	-.154	.222	.308
I have a special connection to this place and the people that use it (HT)	.529	.429	-.205	.001	-.003
I feel no commitment to this lake (PA)	.504	.009	-.008	.478	.130
I know this place better than the people that run it	.146	.711	-.008	-.009	.202
I treat this place better than the most other people that come here (HT)	.115	.706	.162	.006	-.009
I have a lot of fond memories about this place (HT)	.347	.493	-.364	.359	.001
I don't tell many people about this place (HT)	-.007	.434	.348	-.316	.357
Everyone should be able to use this place (HT)	-.001	-.005	.870	.157	-.141
People who have used this place longest should have priority using it (HT)	.007	.007	.608	-.362	.201
Managers need to restrict use at this place (HT)	.008	.520	.531	.008	-.129
People should be free to do whatever they want at this place (HT)*	-.176	.004	.003	.767	.008
I do (or would bring my children to this place)*	.007	.001	-.004	.124	.848
Eigenvalue	6.151	2.073	1.654	1.342	1.033
Percentage of Total Variance	30.755	10.366	8.272	6.711	5.164
Reliability (Cronbach alpha)	.898	.545	.545	-----	-----

Factor 1 Scale Mean = 3.39

Factor 2 Scale Mean = 3.33

Factor 3 Scale Mean = 2.51

\*Item in original construct not used in further analysis because of low Reliability Analysis and did not load on the final three factors shown.

#### Literature Cited

- Greenwald, A.G. (1989). Why attitudes are important: Defining attitude and attitude theory 20 years later. In A.R. Pratkanis, S.J. Breckler, & A.G. Greenwald (Eds.), *Attitude Structure and Function* (pp. 429-440). Hillsdale, NJ: Erlbaum.
- Eagly, A.H., & Chaiken, S. (1993). *The psychology of attitudes*. Fort Worth, TX: Harcourt Brace Jovanovich College Publishers.
- Malmberg, T. (1980). Human territoriality: Survey of behavioral territories in man with preliminary analysis and discussion of meaning. (p. 109). Mouton: New York, NY.
- Schefflen, A.E., & Ashcraft, N. (1976). *Human territories: How we behave in space-time*. Prentice-Hall: Englewood Cliffs, NJ.
- Taylor, R.B. (1988). *Human territorial functioning: An empirical, evolutionary perspective on individual and small group territorial cognitions, behaviors, and consequences*. Cambridge University Press: Cambridge, UK.
- Thompson, M.M., Zanna, M.P., & Griffin, D.W. (1995). Let's not be indifferent about (attitudinal) ambivalence. In R.E. Petty & J.A. Krosnick (Eds.), *Attitude Strength: Antecedents and Consequences* (pp. 361-386). Mahwah, NJ: Erlbaum.
- Zinn, H.C. (1992). *Human territoriality and natural resource conflict*. Unpublished manuscript.