

HOW PLACE ATTACHMENTS INFLUENCE RECREATION CONFLICT AND COPING BEHAVIOR

Cheng-Ping Wang
Department of Tourism
Shih Hsin University
Taipei, Taiwan
cpwang@cc.shu.edu.tw

Yin-Hsun Chang
National Taiwan University of Science and
Technology

Abstract.—The purpose of this study was to explore how place attachment influences recreation conflict and coping behaviors based on the Transactional Stress/Coping Model. The interference between bikers and walkers in Bali Zon-An Park in Taipei County, Taiwan was investigated in May and June of 2007. A total of 384 valid questionnaires were collected. The study results indicated that park users with different levels of place attachment perceived different levels of recreation conflict, and users with high place attachment would not like to engage in spatial displacement to another area to cope with recreation conflict. Therefore, place attachment may not only influence the perceived conflicts (stress) of park users, but also their coping strategies.

1.0 INTRODUCTION AND LITERATURE REVIEW

This study explored the relationships among place attachment, recreation conflict, and coping behavior. Previous empirical studies of recreation conflict and coping behavior have focused on the factors affecting recreationists' perceived conflicts and how they coped with those conflicts, but have not addressed how conflict factors influence coping strategies during a perceived conflict.

The Transactional Stress/Coping Model (Lazarus and Folkman 1984) suggests various personal and situational factors that can influence an individual's perceived stress, and coping strategies that may be adopted to minimize the negative feelings. As coping strategies are initiated, the personal-situational relationship changes, and the individual reappraises whether or not the stress still exists. Therefore, a relationship between personal situational factors, stress, and coping can be proposed based on the Transactional Stress/Coping Model.

Goal interference theory (Jacob and Schreyer 1980) defines recreation conflict as "goal interference attributed to another's behavior," and proposes four conflict factors: activity style, resource specificity, lifestyle tolerance, and mode of experience. Activity style is defined as "the personal meanings attached to the set of behaviors constituting a recreation activity" (Jacob and Schreyer 1980). Several studies have indicated that activity style is an essential dimension related to recreation conflict (Kajala 1994, Todd and Graefe 1989, Vaske et al. 2000, Watson et al. 1994), but other researchers do not agree (Ramthun 1995, Schuster 1996, Williams et al. 1994). Resource specificity is "the significance attached to using a specific recreation resource for a given recreation experience" (Jacob and Schreyer 1980). Empirical studies support resource specificity as a predictor of recreation conflict (Adelman et al. 1982, Gibbons and Ruddell 1995, Watson et al. 1994, Widner 1994); for example, Gibbons and Ruddell's (1995) research concludes that visitors with high place dependence are more likely to perceive goal interference. Lifestyle tolerance is defined as "the tendency to reject lifestyles different from one's own" (Jacob and Schreyer 1980). Most studies find that recreationists with higher lifestyle tolerance are less likely to perceive conflict

with other recreationists (Ivy et al. 1992, Ramthun 1995, Watson et al. 1994). The mode of experience factor is defined as “the varying expectations of how the natural environment will be perceived”, but research results on this concept are inconsistent. For example, Watson et al. (1994) found that mode of experience was a significant variable in predicting goal interference and that wilderness users were more focused on the setting and the activity than non-wilderness users. However, Vaske et al. (2000) studied the in-group and out-group conflict among skiers and snowboarders and found that mode of experience only helped predict skiers’ in-group conflicts, not the other three types of conflict (skier-snowboarder, snowboarder-skier and snowboarder-snowboarder).

Neither the Transactional Stress/Coping Model nor the Goal Interference Theory addresses how personal and situational factors influence an individual’s use of coping strategies while experiencing perceived stress. “Place attachment” refers to an individual’s affinity for a specific place and is considered the operationalization of resource specificity, one of the conflict factors from goal interference theory. Empirical studies have indicated that place attachment could predict resource use conflicts among recreationists (see Gibbons and Ruddell 1995 and Vaske et al. 2000), or between recreationists and other resource users such as motorboaters, watercrafters, and coastal landowners (Wang and Dawson 2005). In addition, the literature also indicates that when people are attached to a specific place where they engage in recreation, it can be difficult for them to engage in the coping mechanism of finding a substitute place that is equally satisfying (Hammitt et al. 2006, Kyle et al. 2004). Therefore, place attachment may influence both recreation conflict and conflict coping behavior.

2.0 METHODS

The purpose of this study was to explore how place attachment influences recreationists’ perceived conflict and coping strategies. The study site was Bali Zon-An Park on the western coast of Dan-Shua River in Taipei County, Taiwan. Bali Zon-An Park attracted more than 2.4 million visitors in 2007. It is near the metropolitan

area of Taipei City, and there are various attractions around this park such as the Guan-Yin Mountain Scenic Area, Shihshanhang Archaeological Site, Tanshui Old Street, and Tamshui Fisherman’s Wharf. Visitors to this park can enjoy the nature beauty and participate in various outdoor recreation activities, especially walking and biking. A walking trail was built along the coast next to the biking trail and visitors can cross between the two trails. Thus, there is the potential for conflict or at least interference between walkers and bikers.

A questionnaire employed to collect data for model testing asked about the respondents’ backgrounds, place attachment, recreation conflicts, and the coping strategies they adopted when facing conflicts. Place attachment questions were based on the studies of Bricker and Kerstetter (2000), Moore and Graefe (1994), and Williams and Vaske (2003), in which place attachment contained two dimensions: place identity (affective attachment) and place dependence (functional attachment). Likert scales were used for possible responses which ranged from strongly disagree (1) to neutral (3) to strongly agree (5). The recreation conflict items were based on on-site observations and interviews with both walkers and bikers, and the Likert-scale responses options were: 1 (no influence), 2 (slightly influence), 3 (somewhat serious influence), 4 (serious influence), and 5 (very serious influence). Coping strategy questions were based on Miller and McCool (2003) in which coping strategies included displacement, rationalization, product shift, substitution, and direct action. The Likert-type response scale for coping strategies ranged from strongly disagree (1) to neutral (3) to strongly agree (5).

The survey was conducted in May and June, 2007. A convenience sampling method was used and 384 complete questionnaires were collected. Descriptive Analysis, Cluster Analysis, and ANOVA were conducted using SPSS 17 in order to explore the relationships among place attachment, recreation conflict, and coping behavior.

3.0 RESULTS

3.1 Respondents' Demographics

Of the 384 respondents who provided valid questionnaires, 217 were walkers and 167 were bikers (see Table 1). Just over half (50.7 percent) of the walker-respondents were female, and most were young (54.4 percent were 21-30 years old), had a college education (65.4 percent), and were in the low to middle income category (76.1 percent earned 0~40,000 NTD/month). The largest group of walkers worked in business/service jobs (37.3 percent). Just over half (52.7 percent) of the biker-respondents were male and most were also young (54.5 percent were 21-30 years old), had a college education (65.9 percent), and were in the low to middle income category (76.6 percent earned 0~40,000 NTD/month). Most bikers were in the police/faculty/student employment category (43.1 percent).

3.2 Place Attachment, Recreation Conflicts, and Coping Strategies

To explore how place attachment influenced users' perceived recreation conflicts and coping strategies, weekday respondents (n=97, 48 walkers + 49 bikers) were separated from weekend respondents (n=286, 169 walkers + 117 bikers) due to visitor number differences (i.e. there were higher numbers of visitors and therefore a higher likelihood of crowding and user conflicts on weekends). A cluster analysis was conducted on data from weekend respondents based on their place attachment to Bali Zon-An Park. We used the hierarchical cluster analysis technique with Ward's method and Square Euclidean distance measure options in SPSS 17. Two to four groups were clustered for interpretation, and based on the results, three groups—low place attachment (Low-PA), intermediate place attachment (Intermediate-PA), and high place attachment (High-PA)—were identified for both weekend bikers and walkers. However, only one group was identified for weekday bikers and hikers. Therefore, there were a total of four groups for both bikers and walkers (Tables 2 and 3).

Table 1.—Demographics of study respondents

Variable	Walker (N=217)		Biker (N=167)	
	N	%	N	%
Gender				
Male	107	49.3	88	52.7
Female	110	50.7	79	47.3
Age				
20 and under	37	17.1	38	22.8
21-30	118	54.4	91	54.5
31-40	56	25.8	27	16.2
41-50	2	0.9	6	3.6
51 and up	4	1.8	5	3.0
Income (NTD/month)				
no income	58	26.7	42	25.1
1~20,000	27	12.4	30	18.0
20,001~40,000	80	36.9	56	33.5
40,001~60,000	37	17.1	24	14.4
60,001~80,000	11	5.1	7	4.2
80,001 and up	4	1.8	8	4.8
Education				
Elementary	0	0.0	1	0.6
Junior High	1	0.5	1	0.6
Senior High	53	24.4	35	21.0
College	142	65.4	110	65.9
Graduate School	21	9.7	20	12.0
Employment				
Industry	36	16.6	24	14.4
Business/Service	81	37.3	54	32.4
Police/faculty/student	74	35.0	72	43.1
Other	14	6.5	10	6.0
Unemployed	10	4.6	7	4.2

The study tested whether or not respondents with different place attachment levels had different levels of perceived recreation conflict and different coping strategies. ANOVA test results indicated that the four groups of walkers were significantly different in two types of conflict (conflict from bikers and conflict from walkers) and two types of coping strategies (absolute displacement and director behavior) (Table 2). Weekend walkers with the lowest place attachment scores (Low-PA) were most likely to experience conflict with both bikers and other walkers; in addition, of the four walking groups, weekend Low-PA walkers were most likely to leave the park (absolute displacement) when they experienced perceived conflicts. Weekday walkers with relatively high

Table 2.—Mean values for nine variables and the AVOVA test results for groups of walkers in the Zon-An Park

Variable		Weekday	Weekend			ANOVA
		(n=48)	Low-PA (n=33)	Intermediate-PA (n=112)	High-PA (n=24)	F
Place Attachment	Place identity	3.1 ^b	2.5 ^a	3.0 ^b	3.9 ^c	38.393*
	Place dependency	2.9 ^c	1.8 ^a	3.0 ^c	2.6 ^b	57.509*
Stress	Conflict with bikers	1.8 ^a	2.4 ^b	2.0 ^{ab}	2.3 ^{ab}	3.530*
	Conflict with walkers	1.4 ^a	2.1 ^b	1.7 ^{ab}	1.8 ^{ab}	3.977*
Coping Behavior	Cognitive coping	3.3	3.4	3.4	3.2	1.121
	Absolute displacement	2.2 ^{ab}	2.4 ^b	2.2 ^{ab}	1.8 ^a	3.003*
	Temporal displacement	3.5	3.2	3.2	3.3	1.779
	Direct behavior	2.4 ^b	1.9 ^{ab}	2.3 ^b	1.7 ^a	4.990*
	Spatial displacement	2.9	2.8	2.9	2.7	0.650

Note: 1. *P<0.05.

2. ^{a, b, c} are the ANOVA groups based on Scheffe Test.

Table 3.—Mean values for nine variables and the AVOVA test results for groups of bikers in the Zon-An Park

Variable		Weekday	Weekend			ANOVA
		(n=49)	Low-PA (n=42)	Intermediate-PA (n=53)	High-PA (n=22)	F
Place Attachment	Place identity	3.1 ^b	2.8 ^a	2.9 ^{ab}	4.0 ^c	29.687*
	Place dependency	2.6 ^b	2.0 ^a	3.0 ^c	3.0 ^{bc}	35.400*
Stress	Conflict with bikers	1.8 ^a	2.5 ^b	2.2 ^{ab}	2.2 ^{ab}	5.594*
	Conflict with walkers	1.8 ^a	2.7 ^b	2.5 ^b	2.6 ^b	7.686*
Coping Behavior	Cognitive coping	3.3	3.4	3.3	3.5	0.866
	Absolute displacement	1.9 ^a	2.5 ^b	2.4 ^b	2.1 ^{ab}	6.488*
	Temporal displacement	3.5	3.1	3.2	3.5	1.988
	Direct behavior	2.4	2.4	2.5	2.4	0.493
	Spatial displacement	2.9	2.9	3.1	3.4	2.013

Note: 1. *P<0.05.

2. ^{a, b, c} are the ANOVA groups based on Scheffe Test.

place attachment perceived lower levels of recreation conflicts, and preferred temporal displacement (walking at a different time of day) when they experienced perceived conflicts. Weekend walkers with the highest place attachment scores reported some conflicts, but did not tend to leave the park in response.

ANOVA test results indicated that the four groups of bikers were significantly different from each other in levels of perceived conflicts with bikers and walkers and in one type of coping strategy (absolute

displacement) (Table 3). Weekend Low-PA bikers were the most likely to experience both types of recreation conflicts; in addition, they had the highest potential to leave the park (absolute displacement) when they experienced perceived conflicts. Weekday bikers with relatively high place attachment reported the lowest perceived recreation conflicts, and had the lowest potential to leave the park. Weekend bikers with the highest place attachment scores did report conflicts, but did not tend to leave the park in response.

4.0 DISCUSSION

Weekday users perceived lower recreation conflict than weekend users (Tables 2 and 3). Since the number of visitors on weekdays is lower than on weekends, fewer social interactions may decrease the opportunities for and likelihood of recreation conflict. This may also explain why the study results did not find a positive relationship between resource specificity (operationalized as place attachment in this study) and recreation conflict as suggested by goal interference theory and research. Comparing weekday users and weekend users, weekday users had higher place attachment scores than Low-PA weekend users, but perceived higher recreation conflict than Low-PA weekend users (Tables 2 and 3).

As suggested by the Transactional Stress/Coping Model, respondents in this study tended to adopt coping strategies when they perceived recreation conflict. Walkers would be more likely than bikers to leave the park (absolute displacement) in order to alleviate perceived conflict. Since recreationists generally do not like to substitute another recreation area for their own when they are more psychologically attached to a park, it follows in this study that most park users would not consider absolute displacement when perceiving recreation conflict. As expected, park users in this study with low place attachment perceived higher recreation conflict and more often intended to adopt absolute displacement than those users with high place attachment. Therefore, park users' coping behaviors were affected by both recreation conflict and resource specificity (that is place attachment). These results extend the findings of previous research that discussed but did not study the relationship between stress and coping.

5.0 ACKNOWLEDGMENT

This study was funded by the National Science Council, Taiwan (NSC 96-2415-H-128-004). The authors wish to express gratitude to Chad Dawson, professor at SUNY College of Environmental Science and Forestry, and Yi-Chung Hsu, professor at National Dong Hwa University, Taiwan, for their valuable comments and suggestions.

6.0 LITERATURE CITED

- Adelman, B.; Heberlein, T.; Bonnicksen, T. 1982. **Social psychological explanations for the persistence of a conflict between paddling canoeists and motorcraft users in the Boundary Waters Canoe Area.** *Leisure Sciences*. 5(1): 45-61.
- Bricker, K.S.; Kerstetter, D.L. 2000. **Level of specialization and place attachment: an exploratory study of whitewater recreationists.** *Leisure Sciences*. 22: 233-257.
- Gibbons, S.; Ruddell, E. 1995. **The effect of goal orientation and place dependence on select goal interferences among winter backcountry users.** *Leisure Sciences*. 17: 171-183.
- Hammit, W.E.; Backlund, E.A.; Bixler, R.D. 2006. **Place bonding for recreation places: conceptual and empirical development.** *Leisure Studies*. 25(1): 17-41.
- Ivy, M.; Stewart, W.; Lue, C. 1992. **Exploring the role of tolerance in recreational conflict.** *Journal of Leisure Research*. 24(4): 348-360.
- Jacob, G.; Schreyer, R. 1980. **Conflict in outdoor recreation: a theoretical perspective.** *Journal of Leisure Research*. 12: 368-380.
- Kajala, L. 1994. **The applicability of conflict theories in outdoor recreation: a case study of hikers and recreational stock users in the Eagle Cap Wilderness.** Corvallis, OR: Oregon State University, Oregon. M.S. thesis.
- Kyle, G.; Bricker, K.; Graefe, A.; Wickham, T. 2004. **An examination of recreationists' relationships with activities and settings.** *Leisure Sciences*. 26: 123-142.
- Lazarus, R.S.; Folkman, S. 1984. **Stress, appraisal, and coping.** New York: Springer Publishing.
- Miller, T.A.; McCool, S.F. 2003. **Coping with stress in outdoor recreational settings: an application of transactional stress theory.** *Leisure Sciences*. 25: 257-275.

- Moore, R.; Graefe, A. 1994. **Attachment to recreation settings: the case of rail-trail users.** *Leisure Sciences*. 16: 17-31.
- Ramthun, R. 1995. **Factors in user group conflict between hikers and mountain bikers.** *Leisure Sciences*. 17: 159-169.
- Schuster, R., Jr. 1996. **Conflict management in outdoor recreation activities.** Laramie, WY: The University of Wyoming. M.S. thesis.
- Todd, S.; Graefe, A. 1989. **Level of experience and perception of conflict among canoeists on the Delaware River.** In: More, T.; Donnelly, M.; Graefe, A.; Vaske, J., eds. *Proceedings of the 1989 Northeastern Recreation Research Symposium*. Gen. Tech. Report NE-132. Broomall, PA: U.S. Department of Agriculture, Forest Service, Northeastern Forest Experiment Station: 147-156.
- Vaske, J.; Carothers, P.; Donnelly, M.; Baird, B. 2000. **Recreation conflict among skiers and snowboarders.** *Leisure Sciences*. 22: 297-313.
- Wang, C.P.; Dawson, C.P. 2005. **Recreation conflict along New York's Great Lakes coast.** *Coastal Management*. 33: 297-314.
- Watson, A.; Niccolucci, M.; Williams, D. 1994. **The nature of conflict between hikers and recreational stock users in the John Muir Wilderness.** *Journal of Leisure Research*. 26(4): 372-385.
- Widner, C. 1994. **Conflict among hikers and horseback riders in the Mount Rogers High Country of Virginia.** Blacksburg, Virginia: The Virginia Polytechnic Institute and State University. M.S. thesis.
- Williams, D.R.; Vaske, J.J. 2003. **The measurement of place attachment: validity and generalizability of a psychometric approach.** *Forest Science*. 49: 830-840.
- Williams, P.; Dossa, K.; Fulton, A. 1994. **Tension on the slopes: managing conflict between skiers and snowboarders.** *Journal of Applied Recreation Research*. 19: 191-213.

The content of this paper reflects the views of the author(s), who are responsible for the facts and accuracy of the information presented herein.