Examining the relationship between loyalty and place attachment in an urban park setting

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Examining the relationship between place attachment and behavioral loyalty in an urban park setting

Abstract

The relationship between place attachment and loyalty has been researched in a variety of recreation and tourism contexts. This study expands upon the existing literature by examining the relationship between place attachment and behavior loyalty within an urban park setting. Specifically, the relationship between the place attachment dimensions of place identity, place dependence, and social bonding with behavioral loyalty, measured by park use frequency and proportion of use in relation to other settings. Two predictive models were tested: the first examined the influence of place attachment dimensions on loyalty as tested in previous research. The second model explored the influence of loyalty on the place attachment dimension, which had been alluded to in previous studies. The data, collected from 405 participants at eight urban parks in Manhattan Beach, California, was analyzed using structural equation modeling (SEM). Contradicting expectations, results of the study found no significant structural paths in the first model with place attachment dimensions predicting loyalty. Interestingly, the second model with behavioral loyalty predicting place attachment indicated significant relationships between all constructs. The findings of the study indicate that for an urban park setting, frequent use of specific parks contributes to stronger place attachment.

Keywords: place attachment; behavioral loyalty; urban parks; social bonding; frequency of use

Management Implications

Place attachment and loyalty research have important management implications as both concepts are tied to continued use and visitations. Managers should make note of place attachments potential to facilitate loyalty. The relationship between attachment and loyalty is a close one. It is important to prioritize the retention of current park visitors who may develop attachment over time. Management should continue to provide access to parks, park facilities, and opportunities for a variety of recreational interests that drive continued use. Accessibility and diversified offerings encourages increased park use. The development of loyal, attached visitors creates strong advocates for recreation places.

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1. Introduction

Place attachment has received a great deal of attention in recreation and tourism research. Place attachment has been researched in conjunction with large natural resource areas such as national parks (Hwang, Lee, & Chen, 2005: Warzecha & Lime, 2001) and forests (Hammitt, Backlund, & Bixler, 2004; Kyle, Absher, & Graefe, 2003), urban parks (Budruk & Stanis, 2013; Lee & Shen, 2013) and tourist destinations (Gross & Brown, 2006; Prayag & Ryan, 2012; Tonge, Ryan, Moore, & Beckley, 2015) among other settings. While place attachment research in urban park settings exist, most of this research has focused on one large urban park (Budruk & Stanis, 2013; Kyle, Mowen, & Tarrant, 2004; Moore & Scott, 2002) or a specific user group within a park setting (Lee & Shen, 2013). However, most urban areas cater to a variety of recreational uses through numerous small to mid-scale parks. It is these settings where place attachment research is needed.

Research has explored how attachment was related to recreationists' loyalty to the places they visit, as well as to recreation agency programs and facilities (Backman & Compton, 1991; Kyle, et. al. 2004; Lee & Shen, 2013). Loyalty has been examined as both an attitude (how loyal people say they are to an area or agency, as well as actual behavior (how often people visit a park, or register for a recreation class). There have been multiple conceptualizations of the concept of loyalty as it relates to recreation participation (Selin, Howard, Udd, & Cable, 1988; Iwasaki & Havitz, 1998, 2004; Lee & Shen, 2013); however, there has been relatively little research examining the extent to which loyalty predicts or is predicted by place attachment.

The purpose of this study is to further the research on place attachment in urban park settings by examining place attachment throughout an urban park system. Many urban areas have

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limited nearby natural areas for leisure and recreation. For a parks and recreation agency it is important to understand the connections users have with these parks. As Ryan (2006) suggested, fostering attachment between residents and urban parks can help to successfully manage and develop parks. Yet, there is little understanding as to the formation of attachments to recreational spaces within urban areas (Madgin, Bradley, & Hastings, 2016). This study examines how attachment to parks and park user loyalty are related. Specifically, we hypothesize that place attachment predicts behavioral loyalty to urban recreation parks and facilities. Given the unique nature of urban park settings, we also test a second model where behavior loyalty predicts place attachment. A better understanding of users' attachment to parks, and how that attachment is related to park user loyalty will help park management communicate the need to provide and maintain urban outdoor recreation facilities and services.

2. Background

2.1 Place Attachment

Place attachment scholars have indicated that the concept of place attachment originated from attachment theory (Kim, Lee, & Lee, 2017). Attachment theory is grounded in the notion that infants form an attachment or bond to the mother, which influences expectations and behaviors as children develop (Bowlby, 1958; Mennen & O'Keefe, 2005). Derived from this theory, place attachment is viewed as a bond or link between people and places (Hidalgo & Hernandez, 2001). It is a concept that has received much attention across a variety of disciplines (Lewicka, 2011). Lewicka (2011) examined over 40 years' worth of place attachment research related to the development of the concept, its application across academic disciplines, measurement issues, variables that appear to be related to the development of attachment, and

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directions for future research. There has been place-based research through disciplines such as environmental psychology, sociology, tourism, events management, public health and recreation resource management (among others). Recently Hosany, Prayag, Van Der Veen, Huang, and Deesilatham (2017) made a case that destination marketers should make strengthening visitor place attachment a priority through strategies such as enhancing visitor interactions with a destinations' physical setting, or promoting visitor and resident social interactions.

Overall, there seems to be consensus in the literature that place attachment is a multi-dimensional construct (Chen, Dwyer, & Firth, 2014; Ednie, Daigle, & Leahy, 2010; Hammitt, Kyle, & Oh, 2009; Williams & Roggenbuck, 1989; Williams & Vaske, 2003). Some authors have utilized a two dimensional frame of place attachment including place dependence and place identity (Williams & Roggenbuck, 1989; Williams & Vaske, 2003). Place identity refers to a deep connection between an individual's personal identity and a place (Proshansky, 1978). Place dependence acknowledges a place's ability to meet an individuals' functional needs that may not be equivocally met by another place (Stokols & Shumaker, 1981). Additional studies have included other dimensions of attachment such as social bonding, familiarity, belongingness, rootedness, affective attachment, place memory, and place expectation (Chen, Dwyer, & Firth, 2014; Hammitt, Kyle, & Oh, 2009; Kyle, Graefe, & Manning, 2005). In particular, studies have incorporated social bonding to identify the extent to which people become attached to places, arguing that attachments are derived from the social relationships places support, not just their physical characteristics (Kyle, Graefe, & Manning, 2005; Kyle & Chick, 2007).

In community and neighborhood contexts, environmental psychologists have examined the scale of place attachment, measuring attachments to home, neighborhood, city, region, state,

and continent level attachments (Lewicka, 2011, Trentelman, 2009). However, that research rarely extends to municipal parks. Moore & Scott (2002) examined municipal park users' attachments to a large park (1,900 ac), versus attachments to a 4 mile paved trail within that park. Findings suggested that participants reported within park attachments based on the activity they participated in. Hikers were more attached to the park, where as bikers and in-line skaters were more attached to the paved trail within the park. A few studies have examined attachment through data collection at multiple parks (Lee & Shen, 2013; López-Mosquera & Sánchez, 2013). More recently, Madgin et al. (2016) examined attachments to recreational sports spaces and activities in urban areas. They concluded that those spaces "provoke multi-layered and complex attachments that are inextricably connected to both temporal and spatial narratives and (b) that research on neighborhood recreational spaces can develop understanding of the intricate relationship between the social and physical dimensions of place attachment" (p. 677).

2.2 Loyalty

An often reported definition of loyalty cited in parks, recreation and tourism literature (Yuksel, Yuksel, & Bilim, 2010; Lee & Shen, 2013; Lee, Graefe, & Burns, 2007) has been from Oliver (1999). Specifically, Oliver defined loyalty as ‘‘a deeply held commitment to re-buy or re-patronize a preferred product/service consistently in the future, thereby causing repetitive same-brand or same brand set purchasing, despite situational influences and marketing efforts having the potential to cause switching behavior’’ (Oliver, 1999, p.34). This definition contends that loyalty can be understood as a function of an individual's actual behavior, for example, repeat registrations for a municipal recreation activity class. In addition, some leisure studies researchers seem to focus on psychological commitment as a form of attitudinal loyalty (Kyle &

Mowen, 2005; Kyle et. al., 2004), while others suggest loyalty is a construct best defined as including both attitudes and actual behaviors (Selin, et. al., 1988; Iwasaki & Havitz, 1998, 2004; Lee & Shen, 2013). Backman & Crompton (1991a) defined loyalty as both psychological commitment and behavioral consistency in their study on recreation activities, and further identified four levels of loyalty including high, spurious, latent, low (see Fig. 1). High loyalty was defined as both high attachment and high participation; spurious loyalty was defined as high frequency of participation, but low attachment; latent loyalty was defined as a strong attachment but low participation frequency; low loyalty was defined as low attachment and low participation frequency.

Behavioral Consistency (Intensity of use)	Psychological Attachment: Weak	Psychological Attachment: Strong
Low	Low	Latent
High	Spurious	High

Fig. 1. Backman and Crompton's Loyalty Paradigm

Loyalty to recreation agencies and managed recreation areas has been a widely researched topic. Researchers have examined leisure participant's loyalty to large recreation areas such as forest areas (Lee, Graefe, & Burns, 2007), specific amenities within parks like hiking trails (Kyle, et. al., 2004), and specific activities such as dog parks (Lee & Shen, 2013). Early studies focused on defining loyalty in the contexts of recreation agencies (Selin, et.al, 1988), while following studies began to formalize a loyalty construct (Backman & Crompton, 1991) and also identify variables related to loyalty such as service quality (Backman &

Veldkamp, 1995), involvement (Park, 1996; Iwasaki & Havitz, 1998, 2004; Kyle et.al, 2004; Kyle & Mowen, 2005); and satisfaction (Lee, Graefe, & Burns 2007).

In a relatively early study examining loyalty and municipal agencies, Selin et al. (1988) examined consumer loyalty to municipal recreation programs. In this investigation loyalty was conceptualized to include both behavioral and attitudinal loyalty. Behavioral loyalty was measured as a proportion of recreation program registrations from any agency in the respondents living area, with the frequency of registrations with the specific agency under study. Attitudinal loyalty was measured by a five item scale that measured respondents' attitudes about a municipal recreation program, and the likelihood of switching to another agency's programs. The focus of their study was on municipal recreation customers repeat enrollment in activity classes offered by a specific agency. They found that loyalty (or repeat registrations) had more to do with customer convenience and habit, than actual brand loyalty or connection to the agency.

Building on interest in understanding how customers develop loyalty to municipal recreation agencies, Iwasaki & Havitz (1998, 2004) proposed that the development of behavioral loyalty to recreation agencies was a function of an individual's level of activity involvement and psychological commitment. Involvement was defined as "people's beliefs about their leisure participation including the importance of and interest in such participation, and symbolic values derived from it (p.46)." Psychological commitment was as defined as "people's attitude toward a brand (e.g., a recreation service provider) such as their resistance to change their preferences toward the brand (p. 46)." Loyalty was defined as "people's attitude and behavior toward a brand of serviced and repeat patronage in the use of the brand (p.46)." Specifically, they measured behavioral loyalty by identifying the frequency of attendance and participation at respondent's

primary recreation service agency. They asked respondents to list how many days per week they participated in activities at their primary agency, how many hours per week they participate in a particular activity at that agency, in addition to how many hours per week they spend in a particular activity outside of the agency. They calculated a proportion of participation at the agency in question as a measure of behavioral loyalty to the agency. Combined, these measures represent behavioral loyalty. Ultimately, their theoretical model and testing found evidence that involvement and psychological commitment were antecedents of loyalty to recreation agencies.

Loyalty has also been heavily researched in tourism literature. In tourism research, tourist or destination loyalty has been conceptualized as attitudinal, behavioral, or a composite of attitudes and behavior as noted by Jacoby and Chestnut's (1978) early work on brand loyalty. Behavioral loyalty is outcomes focused and often operationalized as repeat purchase/visit behavior (Lee, Kyle, & Scott, 2012). The common measures of behavioral loyalty were developed by Iwasaki & Havitz (1998) and outlined in the previous paragraph. While actual behavior should be used to measure behavioral loyalty, often times behavioral intentions are used and considered to be an effective measure behavioral loyalty (Zhang et al., 2014). The concern with behavioral loyalty is that it may not explain the how or why of a visitors willingness to return to or recommend a destination (Yoon & Uysal, 2005). Attitudinal loyalty reveals psychological commitments or why people utilize a product or service (Iwasaki & Havitz, 1998; Lee et al., 2012). Consumer Composite loyalty combined the behavioral and attitudinal approaches (Backman & Crompton, 1991b). Tourism literature pertaining to loyalty has included items pertaining to intentions to return and intentions to recommend to others (Chen & Phou, 2013; Chi & Qu, 2008; Oppermann, 2000; Prayag & Ryan, 2012).

2.3 Place Attachment and Loyalty

Ample evidence exists that has linked place attachment and loyalty. Studies have utilized dimensions of place attachment as indicators of attitudinal loyalty. For example, Kyle et al. (2004) measured loyalty through the use of place attachment dimensions of place identity and place dependence, arguing that loyalty to an outdoor recreation area can be measured via participant's attitudes toward the area, and that attitudes can be measured through participant attachment. They were interested in how attachment and involvement predicted behavioral loyalty of hikers along the Appalachian Trail. Loyalty was defined as a function of attitudinal and behavioral commitment. Specifically, their study conceptualized psychological commitment as "the attitudinal component of loyalty and an antecedent of behavioral loyalty" (p. 102). They proposed a model indicating that involvement influences commitment to a recreation area, which in turn influenced behavioral loyalty. Results indicated only partial support for their model.

Kyle & Mowen (2005) examined involvement and commitment through similar constructs. Their study did not specifically examine loyalty, but similar to Iwasaki & Havitz (2004) they examined involvement and agency commitment, a construct that can also be understood as agency loyalty. Specifically, Kyle & Mowen's (2005) study differed in their investigation of the relationships between involvement and commitment as their conceptualization of commitment included individual's sense of attachment to a recreation agency. Additionally, their study differed from Iwasaki & Havitz (2004) in that they assessed resident's attachment and commitment to an entire municipal recreation agency, not just to fitness classes. They also suggested that an individual's attitude towards an agency is reflective of their commitment to an agency, and that attitudes are comprised of both beliefs and behavioral

intentions. Grounded in a similar investigation into sense of place by Jorgensen & Stedman (2001), Kyle & Mowen (2005) conceptualized commitment as an attitudinal attachment that can be measured via three common domains of place attachment (place identity, place dependence and social bonding) as well as two attitudinal domains of affective attachment and value congruence. Ultimately, Kyle & Mowen's study found marginal support for involvement influencing commitment, however, differing from previous research related to municipal recreation agencies, they added components of place attachment in their investigation.

Lee, Graefe, & Burns (2007) examined loyalty to outdoor recreation destinations, specifically to forest settings. Their study examined factors such as service quality, activity involvement, satisfaction, and impacts on destination loyalty which was conceptualized as including attitudinal loyalty, conative loyalty, and behavioral loyalty. In this case, similar to Kyle & Mowen's (2005) approach, the authors paired attitudinal and conative (behavioral intention) loyalty with place identity and place dependence domains of place attachment. Different from Kyle & Mowen (2005) however, Lee Graefe & Burns included a measure of behavioral loyalty, as measured by the number of visits to forest areas in a year. Their study found support for a developmental model of destination loyalty where both service quality and satisfaction were predictors of behavioral loyalty.

López-Mosquera & Sánchez (2013) sampled suburban park users at a 20 acre and 135 acre park. They examined the mediating role of place attachment between the social and health benefits of a park visit and visitors park loyalty. While place dependence had a significant direct relationship with loyalty, place identity did not. Lee and Shen's (2013) study included 15 parks to examine the relationship between involvement, attachment, and loyalty. They argued that both

place attachment and leisure involvement were predictors of destination loyalty, something they conceptualized as repeat visits to urban dog parks in Taiwan. Both involvement and place attachment were measured similarly to the studies by Kyle et al. (2004) and Kyle & Mowen (2005). However, behavioral loyalty was measured as a ratio of activity and visits to a specific dog park, a similar behavioral measure as utilized by Iwasaki & Havitz (2004), and Lee, Graefe, & Burns (2007). Their study focused exclusively on park users walking their dogs. Both place identity and dependence had a direct effect on attitudinal loyalty, and an indirect effect on behavioral loyalty.

The relationship between place attachment and loyalty has also been examined in tourism literature. Cardinale, Nguyen, and Melewar's (2016) discussion highlights that while prior recreation research has suggested that repeat visits leads to stronger emotional attachment (Moore & Graefe (1994), tourism researchers have identified place attachment as an antecedent of repeat visitation, arguing that destination experiences can increase emotional ties resulting in a desire to return. In Cardinale, Nguyen, and Melewar's (2016) study of winery visitors, place attachment had a positive effect on loyalty. In tourism literature pertaining to the attachment-loyalty relationship, loyalty is most commonly measured by some combination of visitors' intention to return, intention to recommend to others, affect, or comparison among other destinations (Alexandris, Kouthouris, & Meligdis, 2006; Lee et al., 2012; Loureiro, 2014; Prayag & Ryan, 2012; Yuksel, Yuksel, & Bilim, 2010). Tourism scholars have traditionally measured the influence of place attachment on visitors' future loyalty intentions. In terms of behavioral loyalty, one exception is a study by Mechinda, Serirat, & Gulid (2009) that utilized one item, number of repeat visits, to measure behavioral loyalty.

The measure of place attachment in attachment-loyalty research varies. Most studies incorporated the traditional two dimensional conceptualization of place attachment (identity and dependence) into their models (Alexandris et al., 2006; Lee & Shen, 2013; Loureiro, 2014; Prayag & Ryan, 2012). Some studies have measured place attachment as second order constructs, incorporating both dimensions of identity and dependence into one factor (Loureiro, 2014; Prayag & Ryan, 2012), while others have used only three items to represent destination attachment as a whole (Chen & Phou, 2013; Mechinda et al., 2009). Yuksel et al.'s (2012) study supported the use of a three-dimensional place attachment structure including affective attachment, and place attachment has an influence on future loyalty intentions. Lee et al. (2012) included an additional place attachment dimension, social bonding, in their model examining the relationship between satisfaction, place attachment, and loyalty. However, due to high correlation they merged place identity and social bonding items into one construct. The results of place attachment's influence on loyalty are mixed. Some studies identified a positive relationship between place attachment and loyalty (Alexandris et al., 2006; Loueiro, 2014; Prayag & Ryan, 2012). Kim, Lee, and Lee (2017) found that the effect of festival quality on "behavioral intentions" was moderated by place attachment. Lee et al. (2012) had mixed results, with place identity having a significant positive effect on revisit intentions, but place dependence was a negative predictor of revisit intentions. Mechinda et al.'s (2009) study supported the relationship between place identity and attitudinal loyalty, but identity only influenced the behavioral loyalty of international tourists, not domestic.

Based on the evidence from studies related to outdoor recreation and tourism, this study examines the extent to which place attachment and behavioral loyalty are related. The previously

mentioned studies have included several additional variables such as involvement, commitment, satisfaction, and service quality as predictors of loyalty, but there is mixed support for models predicting or explaining customer and participant loyalty. Previous place attachment and parks research has shown that attachment and loyalty are very similar conceptually (Kyle et al., 2004). Both refer to a commitment to a product, service, or place. In nature-based recreation research loyalty has been measured through an examination of place attachment (Kyle et al., 2004). Place attachment can be seen as a psychological commitment, and represents an attitudinal construct. Attitudinal loyalty is an important antecedent to behavioral loyalty, and it has been suggested that attitudinal loyalty can be measured using place attachment items (Lee, Graefe, and Burns (2007). Therefore, this study will operationalize place attachment to represent attitudinal loyalty as an antecedent of behavioral loyalty.

Alternatively, the influence of behavioral loyalty on place attachment has not been explored in depth. Several previous studies have alluded to this relationship. There is some clear evidence that hints to the influence of frequency of use and/or repeat visitation on place attachment (Williams & Vaske, 2003; Peters, Elands, & Buijs, 2010; Eder & Arnberger, 2012; Vorkinn & Riese, 2001; Mesch & Manor 1998). Given the theoretical plausibility of the two-way relationship between behavioral loyalty and place attachment, two hypothetical models are presented here.

2.4 Hypothesized models

Based on previous research examining the attachment-loyalty relationship (Lee et al., 2012; Lee & Shen, 2013; López-Mosquera & Sánchez, 2013; Prayag & Ryan, 2012), we hypothesized that each place attachment dimension consisting of place identity, place

dependence, and social bonding will predict behavioral loyalty. It is predicted that each attachment dimension will positively influence loyalty. As park users attachment increases, subsequently so too will their loyalty in terms of frequency of use and proportion. Given the close natured relationship between attachment and loyalty (Kyle et al., 2004), the mixed results of previous studies, and the alluded two influence of behavioral loyalty on place attachment, a reciprocal hypothesis that behavioral loyalty positively and significantly influenced each of the dimensions of place attachment was also tested. Figure 2 and Figure 3 illustrate the two hypothesized models.

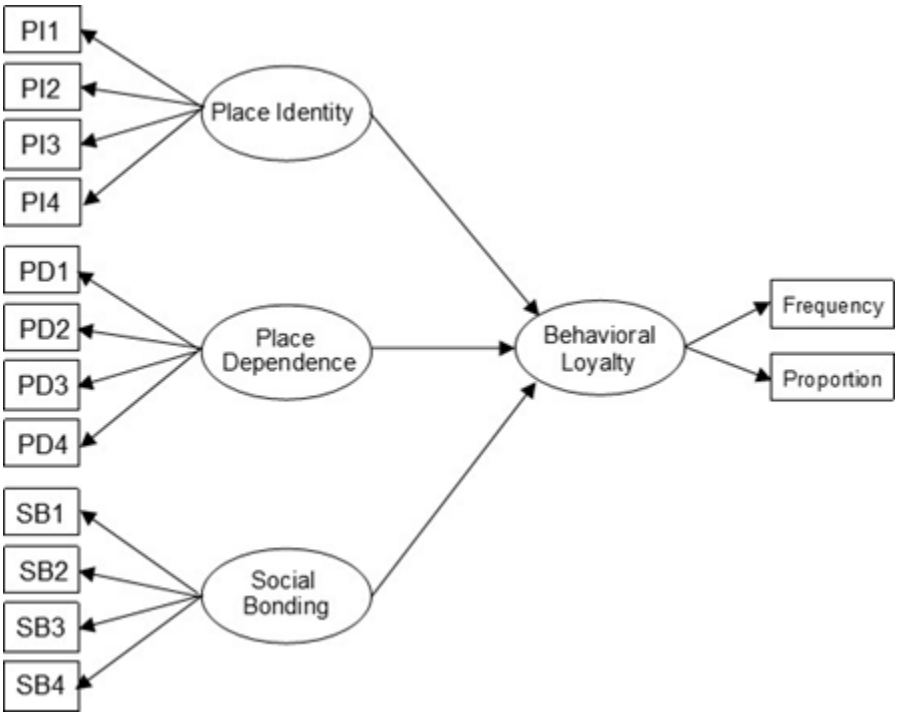

Fig 2. Hypothesized model with place attachment dimensions influencing behavioral loyalty.

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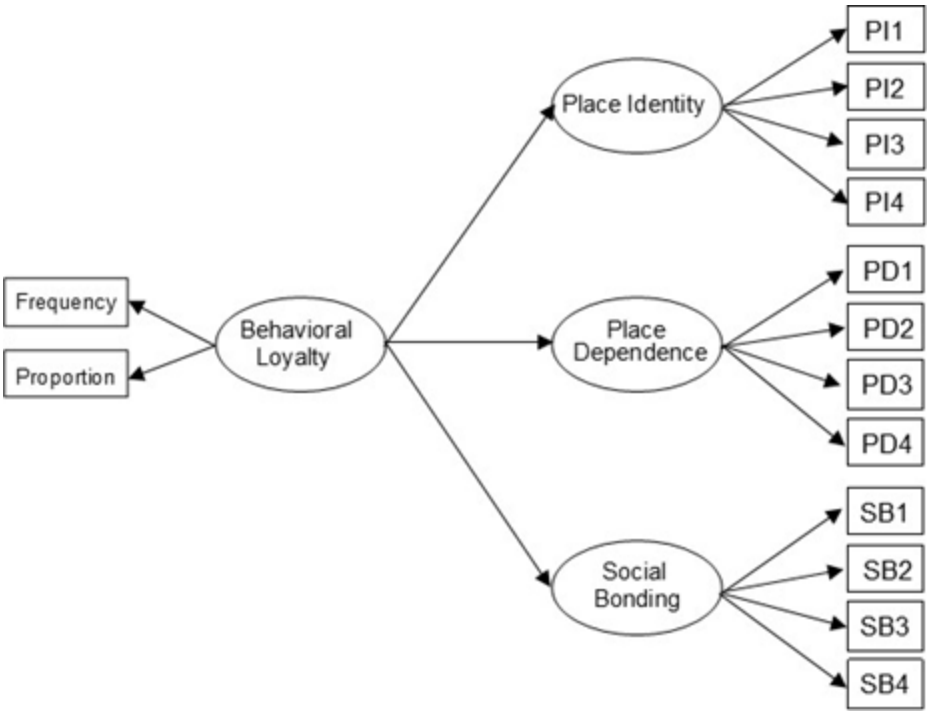

Fig 3. Hypothesized model with behavioral loyalty influencing place attachment dimensions.

3. Methods

3.1 Study area and sample

Prior to data collection, permission was obtained from the Manhattan Beach Parks and Recreation Department to conduct the study at parks throughout the city. An onsite survey methods was used for this study. The survey was administered between August 2014 and May 2015 at eight Manhattan Beach, California parks. Eight of Manhattan Beach's eleven parks were used as the study sites to represent the diverse recreation opportunities the city parks offer, including: sand dunes, trails, sports complexes, and traditional park opportunities (playgrounds, picnics, etc.). A stratified sampling technique was used to contact park users at different times of the day on weekdays and weekend to gain a representative sample across the eight parks. Undergraduate students from a California State University administered the survey as a part of a

class project. Students moved throughout the parks to contact users participating in a variety of park activities.

3.2 Survey instrument and m*easurement*

The questionnaire was developed from similar studies measuring place attachment, and in its entirety asked questions pertaining to activity participation, agency awareness, loyalty to the park, primary activity participated in, place attachment, importance and performance of facilities and services, and demographics. The questionnaire was pilot tested utilizing a weekend special event in the city of Manhattan Beach, California, and results reflected no change in the instrument used in this study. Participants were asked which activities they participated in, and which activity was their primary activity. Information on agency awareness was gathered by asking participants which agency they thought managed the park. Behavioral loyalty data was collected to examine the importance of Manhattan Beach parks for participants' recreation and social activities. Loyalty is typically operationalized as a multi-item construct (Moore, Rodger, & Taplin, (2015). Previous research has identified that in addition to intentions, of greater interest to managers is actual visitor behavior (Moore, et. al., 2015). Therefore, building from Iwasaki & Havitz's (1998, 2004) research, we operationalized loyalty as a muti-item construct to measure actual behavior of visitors. Specifically, behavioral loyalty was observed through frequency of attendance and proportion of participation (Iwasaki & Havitz, 2004). Frequency was measured by asking "On average, how many days per week do you visit this (park/trail)." Proportion of participation was measured in two parts: "How many hours in a typical week do you spend at the City of Manhattan Beach parks and trails?" and "Including the hours you spend at the City of Manhattan Beach parks and trails, how many hours in total do you participating in

recreational and social activities outside your home?" Proportion of participation was then calculated by dividing participant responses to hours spent at Manhattan Beach parks by total hours participating. Kyle et al. (2005) sampled Appalachian Trail visitors to test a three factor place attachment model. The three factors consisted of place identity, place dependence, and social bonding, each measured by four items. Their analysis provide support for measuring place attachment as a first-order, three-factor correlated model. This study modified Kyle et al.'s 12-item scale to measure place attachment as three correlated factors represented by place identity, place dependence, and social bonding.

3.3 Hypothesized models and data analysis

Data were coded and analyzed using SPSS 24. The following process was used to assess and analyze the data. Data cleanup, a missing data analysis, and test for normality were performed prior to the analysis. During the process of data clean-up, 73 responses were removed prior to analyze due to non-responses to loyalty questions or skipping several place attachment questions, resulting in a usable sample of 405 responses (84.7%). Therefore, descriptive analysis of the sample was performed, and respondents were compared to non-respondents (participants providing incomplete data). Chi-square statistics indicated no significant differences between respondents and non-respondents based on the park they were contacted at ($\chi^2 = 12.83$, $p = .076$) and gender ($\chi^2 = .003$, $p = .954$). Furthermore, ANOVA showed no significant difference between the two groups based on age ($F = 2.38$, $p = .124$). A small number of cases missing one or two place attachment item response were retained, and missing data was replaced using the regression estimation technique. Normality was assessed by examining skewness and kurtosis. To assume normality, skewness and kurtosis should not exceed +/- 3.0 and 8.0 respectively

(Kline, 1998). Item skewness ranged from -1.24 to .90, and kurtosis ranged from -.92 to 1.11; therefore, analysis proceeded with the data treated as normal.

Confirmatory factor analysis (CFA) using AMOS 24.0 was conducted to assess the relationship between factors. Cronbach's alpha and composite reliability (CR) were used to assess scale reliability for the place attachment dimensions. Values of .70 or greater are considered acceptable indicators of internal consistency (Fornell & Larcker, 1981; Nunnally & Bernstein, 1994). The social bonding item "I wouldn't tell many people about this park/path" was removed to improve scale reliability. Pearson's correlation analysis was used to assess the internal consistency of the two item behavioral loyalty scale. Average variance Extracted (AVE) was used to assess scale validity. Levels exceeding 0.50 are considered acceptable to support convergent validity (Fornell & Larcker, 1981). To assess the model fit, several fit indices are reported. Kline (2005) advocates for the reporting of the Chi-Square test, the comparative fit index (CFI), the standardized root mean square residual (SRMR), and the root mean square error of approximation (RMSEA) when assessing model fit. A normed Chi-Square (χ^2/df) lower than three is considered a good fit (Kline, 1998). CFI $\geq$ 0.95, SRMR < 0.08, and RMSEA <0.06 indicate a good model fit (Hu & Bentler, 1999). Following CFA, structural equation modeling (SEM) was used to examine the influence of behavioral loyalty on each dimension of place attachment. The structural model is assessed using the same goodness of fit indices used with the CFA model.

4. Results

4.1 Respondent characteristics

In total, 491 of 800 visitors contacted participated in the survey across the eight parks. Following a missing data analysis and checks for valid responses, 405 responses (50.6%) were usable for analysis. Demographic data of usable responses were compared to census data of primary locations of residency to ensure the data was representative of the population. Demographic data of respondents closely aligned with the census data. The average respondent was white (54.9%), female (52.5%), 36 years old, and a resident of Manhattan Beach (52.4%). Participants were utilizing the parks for a variety of activities. Twenty-one percent of participants engaged in sports activities (baseball, basketball, soccer, tennis, etc.) at the park. Playing or using the playgrounds (20.2%), general exercise or running/jogging (18.6%) walking for pleasure or exercise (14.3%), and walking and playing with the dog (9.1%) rounded out the most frequently identified primary activities. Very few participant knew who managed the park (agency awareness). Only 15.3% of respondents accurately identified Manhattan Beach Parks or the Parks and Recreation Department as the managing agency. Another 28.6% closely identified the City of Manhattan Beach as the managing agency. Nearly half of respondents (48.1%) had no response for or indicated they didn't know who managed the park they were visiting. Three percent though a different government organization managed the park, while 4.9% indicated an "other" organization, respectively.

4.2 Measurement model

Table 1 presents the CFA results. Results indicated that the items were related to their respective constructs. The behaviorally loyalty items were significantly correlated at the $p < .001$ level, but according to prior research $r = .29$ represents a low correlation (Best & Kahn, 1998). The ratio of chi-square to its degrees of freedom (χ^2/df) was 3.33. Additional fit statistics were as

follows, CFI = .95, SRMR = .04, RMSEA = .076. Previous research has shown that χ^2/df can be affected by large sample sizes, and χ^2/df near 3 can indicate fit (Iacobucci, 2010; McDonald & Ho, 2002). RMSEA values between 0.05 and 0.08 show an acceptable or fair fitting model (Browne & Cudeck, 1993). Furthermore, factor loadings and AVE for the social bonding and behavioral loyalty are consistent with prior research (Iwasaki & Havitz, 2004; Kyle et al., 2005). The intercorrelations between construct pairs were further examined to assess discriminant validity (see Table 2). All construct pairs were less than the square root of each constructs AVE estimates, providing discriminant validity (Hair, Black, Babin, Anderson, & Tatham, 1998). Therefore, based on the model fit indices and consistencies with prior research, the model was considered acceptable.

Table 1.
Factor items, internal consistency, and convergent validity

	Mean (S.D.)	Standardized Loading
Place Identity (α = .80, CR = .84, AVE = .53)	**5.06 (1.32)**	
PI1: This park/path mean a lot to me	5.49 (1.50)	.88
PI2: I am very attached to this park/path	5.08 (1.61)	.91
PI3: I identify strongly with this park/path	4.86 (1.62)	.80
PI4: I feel no commitment to this park/path (R)	4.83 (1.92)	.33
Place dependence (α = .89, CR = .90, AVE = .68)	**4.53 (1.43)**	
PD1: I enjoy recreating at this park/path more than any other parks/paths	4.77 (1.61)	.82
PD2: I get more satisfaction out of visiting this park/path than from any other parks/paths	4.68 (1.59)	.90
PD3: Recreating here is more important than recreating at any other place	4.45 (1.66)	.88
PD4: I wouldn't substitute any other park/path for the type of recreation I do here	4.23 (1.69)	.71
Social Bonding (α = .73, CR = .73, AVE = .48)	**5.08 (1.34)**	
SB1: I have a lot of fond memories about this park/path	4.98 (1.76)	.75
SB2: I have a special connection to this park/path and the people who recreate here	4.49 (1.74)	.68
SB3: I would bring my friends to this park/path	5.77 (1.46)	.64
Behavioral Loyalty (*r* = .29, CR = .47, AVE = .30)		

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FR: Frequency	2.60 (1.69)	.66
PR: Proportion	.52 (.29)	.44

(R) Item was reverse coded.

Table 2.
Latent variables correlation matrix

	Place identity	Place dependence	Social bonding	Behavioral loyalty
Place identity	0.73			
Place dependence	0.60	0.83		
Social bonding	0.50	0.57	0.69	
Behavioral loyalty	0.40	0.46	0.38	0.55

Diagonal values present the square root of average variance extracted of each construct

4.3 Hypothesized model testing

Model 1: Place attachment predicting loyalty. The first structural model tested included the place attachment dimensions as predictors behavioral loyalty. This model is consistent with previous research examining place attachment as an antecedent of loyalty (Lee & Shen, 2013; López-Mosquera & Sánchez, 2013; Yuksel, Yuksel, & Bilim, 2010). Results indicated an adequate model fit (χ^2/df = 3.33, CFI = .95, SRMR = .04, RMSEA = .076). However, there were no significant structural paths between place attachment constructs and behavioral loyalty. Place identity had the strongest positive association (β = .47, SE = 0.025, p = .06), while social bonding had a negative association (β = -.26, SE = 0.025, p = .30), and place dependence was quite weak (β = .09, SE = 0.013, p = .50).

Model 2: Loyalty predicting place attachment. An alternative structural model examined behavioral loyalty as a predictor of the place attachment dimensions (see Fig. 4). Results indicated an adequate model fit (χ2/df = 3.33, CFI = .95, SRMR = .04, RMSEA = .076). Behavioral loyalty was positively associated with place identity (β = .30, SE = 0.901, p < .001),

place dependence (β = .23, SE = 0.836, p < .01), and social bonding (β = .21, SE = 0.887, p < .05). Behavioral loyalty accounted for 0.09 of the variance for place identity, 0.05 for place dependence, and 0.04 for social bonding.

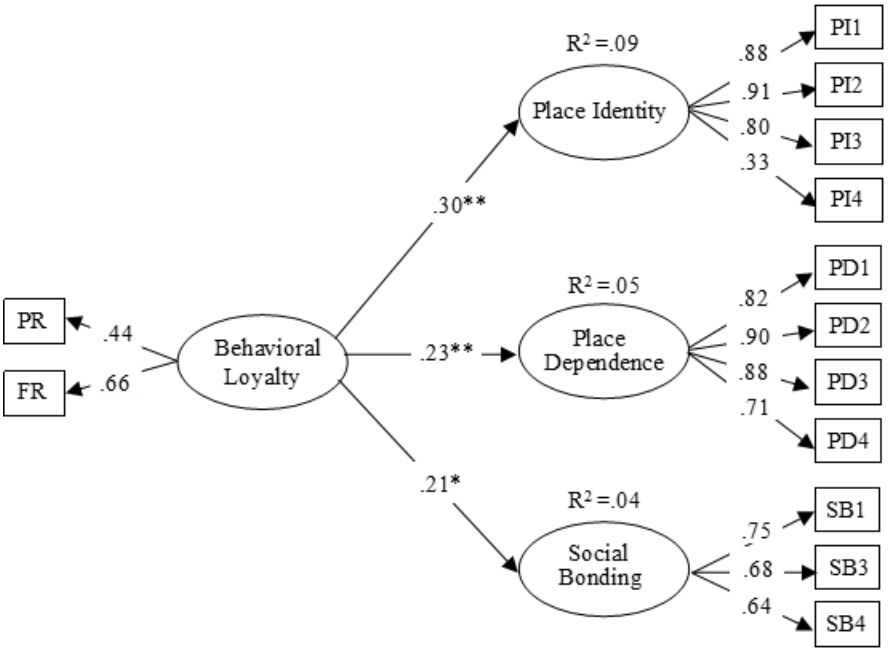

Fig 4. Model 2 showing behavioral loyalty s as a predictor of place attachment dimensions.

5. Discussion and Conclusion

Based on the review of literature's proposed relationship, the first model in this study examined place attachment as a predictor of behavioral loyalty. Conceptually, place attachment represents an attitude towards a place, which can influence behavioral intentions. Research has found stronger place attachment levels indicate greater intentions to return to and recommend a place (Prayag & Ryan, 2012), but tend to lack indicators of actual behavior (did they return?). As previous research highlights, behavioral loyalty is synonymous with repeat behavior (e.g. repeat purchase or return visit) (Lee et al., 2012). Our model with place attachment predicting behavioral loyalty showed no significant structural paths. While not significant, the results of

model one are similar to previous research, with place identity having the strongest positive relationship. As previously mentioned, in prior studies that produced mixed results place identify was the one construct that significantly predicted loyalty of some or all participants (Lee et al., 2012).

Model 2 examined behavioral loyalty as a predictor of attachment. This model showed loyalty significantly predicted all three place attachment dimensions. This inverse relationship contradicts much of the previous research related to place attachment and parks. This model suggests that as park visitors increase their use of the parks, both in frequency and in proportion to participation elsewhere, they start to form stronger attachments to those parks. It is not attachment that gets them to come back, but rather its increased use that strengthens attachment. The distinction could be in the research setting. While much of the place attachment and loyalty research has studied recreationists and tourists at larger destinations, and antecedents of their intention to return, this research took place at smaller urban parks. Park users have a variety of options when it comes to activity setting and available recreation opportunities. Attachments to these parks may only increase as their level use increases. Furthermore, much of the literature pertaining to the relationship between place attachment and loyalty has been conducted at tourism destinations, with data gathered from tourists. In this study over half of the respondents (52.4%) lived in the city where sampling occurred. The majority of remaining respondents lived in nearby cities and visited a Manhattan Beach park as a part of a day trip. Only a small number of respondents resided beyond 50 miles from the parks. The proximity and accessibility of the parks could foster a different relationship between attachment and loyalty. Previous research by Moore and Graefe (1994) has shown that individuals most attached to a recreational trail used

the trail most often and lived closest to it. While not specifically analyzed as a part of their study, Kyle, Mowen, and Tarrant (2004) acknowledge a unique relationship between Cleveland residents and parks within close proximity to their homes. These park settings were described as 'an extension to their back yards' (p. 444). Regular use of urban parks as part of 'daily' life can result in a sense of attachment to the parks. In their study of urban park visitors in the Netherlands, Peters, Elands, and Buijs (2010) found that resident's frequency of park use was the aspect most strongly related to their attachment to the urban parks.

Williams and Vaske (2003) found that the frequency of visitation to four Colorado locations (Rocky Mountain National Park, Cameron Pass, Prouder River and Horsetooth Reservoir) consistently lead to increased place attachment. Zhang and Lei (2013) examined the relationship between residents' place attachment and participation intention in local tourism development. In their findings, the higher frequency of use influenced the development of stronger attachment to everyday landscapes. Further their study found that frequency of use also was a key indicator in identify that a place was a 'favorite' place of residents that had special meaning or where they spent time doing enjoyable activities. Combined, these results are similar to ours that suggest that behavioral loyalty is a predictor to the three dimensions of place attachment.

That behavioral loyalty predicted place attachment in local urban parks may also be related to how loyalty was measured. Prior research has linked repeat visits to the formation of place attachment (Moore & Graefe, 1994), and the present study measured behavioral loyalty using Iwasaki & Havitz's (2004) construct that includes a similar item (frequency of use). George and George (2004) examined the extent to which place attachment mediates the

relationship between a tourists past visitation and intentions to revisit. In their study of visitors to two tourism destinations in India, past visitation had a significant positive effect on intentions, partially mediated through place attachment.

These findings have implications for park managers because past research found that individual's attachment to a recreation place develops loyalty to that place. Our sample reported high attachment as well as a high level of repeat visitation. Some important implications for parks and recreation managers then, is to consider how these places are managed to facilitate relationships through self-directed or organized activities. Our findings contradict several past studies related to attachment and loyalty in park settings (Lee et al., 2012; Lee & Shen, 2013; López-Mosquera & Sánchez, 2013; Prayag & Ryan, 2012), and suggests that repeat visits (in our case, behavioral loyalty) to a recreation area strengthens attachment to that area. These findings are similar to research related to place attachment and loyalty in other settings (for example: Eder & Arnberger, 2012; Vorkinn & Riese, 2001; Mesch & Manor 1998).

Additionally repeat visitors may form social and identify affirming attachment more so than a dependence on the setting for activities for park visitors participate in while at the park. Recreation managers could focus on retaining current park visitors who may then develop attachment over time. It is important that management continue to provide access to parks, park facilities, and opportunities for a variety of recreational interests. Parks that are accessible and offer settings for people to participate in the activities they enjoy encourages the increased use of those parks. Loyal, attached visitors can become important advocates for recreation places. Maintaining park accessibility for a diverse user group is important. If users have access to recreational place where they can frequently participate in the activities they enjoy, their

attachment to those places will increase. Previous research has shown that attachment to places can lead to a number of positive outcomes such as increased satisfaction (Ramkissoon, Smith, & Weiler, 2013), environmentally responsible behavior (Lee, 2011), and more perceived negative views of social and environmental disruptions (Kyle et al., 2004).

The authors recognize certain limitations to this study. Data collection took place for part of the year and therefore may not be representative of all park users. Furthermore, the survey was only presented in English. As shown by the demographics of this sample, the study region has a diverse population. Some park users could have been discouraged from participating due to language barriers. More can still be done in future research. Research on the relationship between place attachment and loyalty has produced conflicting results. Previous research has shown place attachment has an indirect effect on behavioral loyalty when mediated by attitudinal loyalty (Lee & Shen, 2013). However, prior research has also produced mixed results with not all dimensions of attachment predicting loyalty (Lee et al., 2012; López-Mosquera & Sánchez, 2013). More research is needed to further understand the relationship between place attachment and behavioral loyalty in terms of actual behavior. Our findings that behavioral loyalty predicts place attachment differs from previous research which found that attachment predicted loyalty. One distinction in our approach could be that we used place attachment as our representative construct for attitudinal loyalty, whereas some previous studies included place attachment and a separate construct for attitudinal loyalty in their models. While this is not seen as a limitation, future research in an urban park setting with the inclusion of a separate attitudinal loyalty construct may be needed to see how the model is influenced. Furthermore, others conceptualized loyalty as commitment to a place (Kyle & Mowen, 2005), whereas the present study measured

behavioral loyalty as frequency of use and proportion of an individual's visit to a specific park versus all park visits for that individual. In this sense, narrowing place attachment via the dimensions of place identity, place dependence, and social bonding, and narrowing loyalty to a measure of behavioral loyalty produced a different, but significant model. Last, and as discussed, place attached has been shown to influence a number of outcomes. Future research could examine the relationship between behavioral loyalty, place attachment, and these outcomes to better understand how the relationship between place attachment and loyalty influences these outcomes.

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