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DOG PARKS: AN APPLICATION OF PLACE ATTACHMENT THEORY

By

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B.S. May 2009, Old Dominion University

A Thesis Submitted to the Faculty of Old Dominion University in Partial Fulfillment of the Requirement for the Degree of

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ABSTRACT

DOG PARKS: AN APPLICATION OF PLACE ATTACHMENT THEORY

Andrew P. Pariser
Old Dominion University, 2010
Director: Dr. Edwin Gómez

Despite their increasing popularity, dog parks have been subjected to little research. The purpose of this study was to determine if place attachment and its generally recognized sub-components of place dependence and place identity apply to dog parks. Survey respondents were given an on-site questionnaire at a Virginia and at a Florida dog park. Respondents answered questions similar to those used in previous studies of place attachment at other recreational facilities. There was a significant correlation between the constructs of place dependence and place identity and dog park usage. The combined construct of place attachment showed the highest correlation. Regression analysis indicated that only place attachment, but not its sub-components, was a predictor of park usage. There was no significant difference in park usage or in place attachment among income groups. Gender had no significant influence on park use, but females had a higher level of attachment than males. Visitors to the Virginia dog park used the facility more frequently than those in Florida, but they demonstrated less place attachment than their Florida counterparts. A proposed model for viewing place attachment to dog parks as both dependent and independent variables is presented. Based on these findings, some possible areas for future research on this topic were discussed.

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CHAPTER I

INTRODUCTION AND STATEMENT OF STUDY

Man's best friend has been such a close companion of humans that dogs are often considered members of the family. They can be sources of happiness and joy when they are healthy and well-adjusted and can be the cause of loss, mourning, and even depression when they are in poor health or die. As is the case with children, dogs' lives are shaped in accordance with the rules and traditions provided by their adult care providers. Just as children need time to play, so do dogs. Within this context, leash laws, which have been in place for many years, can be viewed as an impediment to dogs' freedom (Shyan, Fortune, & King, 2003). Leash laws have prohibited dogs from running free and have confined them to the indoors during certain times of the day. In response to leash laws, dog parks have been created to provide a place where dogs can run free and socialize outdoors. The first dog park, the Martha Scott Benedict Memorial Park in Berkeley, California, was opened in 1989. Currently, every state in the USA has multiple dog parks (Allen, 2007). Dogparkusa.com is a website that provides up-to-date information on dog park locations throughout the United States.

Dog parks also provide a setting for dog enthusiasts to socialize. This interaction can create strong social networks that, in turn, foster a sense of community in and around the neighborhoods where the dog parks are located (Price, 2006). However, the degree to which people feel a sense of personal "ownership" of the dog parks in their community is unknown. Dogs must rely on humans to be taken to a dog park; therefore, it is important to ascertain if humans feel a sense of attachment to these parks.

Research on dog parks is scant, partly because of their relatively short history. In order to contextualize this study within the larger literature on parks, recreation, and leisure, it should be noted that dog parks are not the first example of public lands or open spaces being set aside for a specific purpose. For example, there is much literature on community gardens and children's playgrounds. This literature provides a relevant model for dog parks, because community gardens and children's playgrounds, like dog parks, developed through grassroots initiatives in order to have open spaces used for specific community purposes (Medianu, 2008). Furthermore, community gardens are noted for creating strong social bonds, socialization, and a sense of community among their users (Glover, Parry, & Shinew, 2004). The literature on children's participation in playgrounds could also be instructive for dog park development, because the benefits that children derive from active participation in playgrounds (Azzarito, Munro, & Solmon, 2004) could be similar to those which dogs may derive from dog parks (e.g., release of energy, benefits of exercise, and developing social interaction skills). Although the focus of this study is not to draw parallels between community gardens and playgrounds, it is important to note that literature on such related areas does exist, even if it is not within the scope of the current study, because this related literature could influence the study of dog parks, given the similarities of their origins and their patronage.

The importance of dog parks, specifically, can best be appreciated within the context of the human-animal bond. In 2001, it was estimated that 58.3% of all U.S. families and 68.9% of families with children had at least one companion animal (Faver & Cavazos, 2008). These authors noted that the majority of cat and dog owners (85% and 78%, respectively) felt that their pets were members of their family (Faver & Cavazos,

2008). Given this emotional investment in pets, it would seem reasonable that pet owners might develop a form of emotional bonding to facilities designed to benefit their animals. This feeling represents the essence of place attachment.

Statement of the Problem

The current study is being conducted to determine the extent to which human users of dog parks perceive place attachment to them. Place attachment is an extensively studied concept that has been applied to a number of disciplines, including the recreation field (Moore & Graefe, 1994). Place attachment has been examined within the context of whitewater rafting (Bricker & Kerstetter, 2000), hiking the Appalachian Trail (Kyle, Graefe, Manning & Bacon, 2003a) and rails to trails (Moore & Graefe, 1994). By contrast, there are no published studies on place attachment to dog parks. This lack of research complicates issues related to the planning and management of dog parks because no information regarding its users (and non-users) exists to inform administrators. The small amount of research literature on dog parks tends to focus on the animal-human interaction in a leisure setting, but not the dog parks specifically (Price, 2006). Some studies have investigated the types of grass needed to withstand animal waste and trampling, dog park location, and space allocation (Allen, 2007). Other related research examines the behavior of dogs and the use of composted dog waste as a resource (Shyan et al., 2003; Nemiroff & Patterson, 2007).

Filling this void in the literature should provide information useful for users and managers of dog parks. For example, it may be useful to know what specific features (e.g., shade, availability of toys, water, and obstacle courses) of a dog park encourage repetitive use or a sense of attachment. Previous reports provide evidence that place

attachment has value in predicting visitor behavior and in managing recreational facilities (Kyle, Graefe & Manning, 2004a). For example, Moore and Graefe (1994) reported that higher levels of place attachment were associated with increased use of recreational activities. It is currently not known who the users of dog parks are, and whether dog park users differ in place attachment and demographics of users.

Statement of the Purpose

The purpose of this study was to measure place attachment as it applies to dog park users. The study investigated whether place attachment plays a significant role in human dog park use. This study seeks to examine relationships between demographics and dog park use demographics and place attachment differences on dog parks. Variables that were measured include demographic and geographic variables, items specific to dog parks, as well as the established items related to place dependence and place identity.

Research Questions

The current study explores the relationship between the concept of place attachment and the use of dog parks. The following are the central research questions of this study.

- Research Question 1: Is there a relationship between place attachment and dog park usage?
- Research Question 2: Are there relationships between specific demographic factors and dog park use?
- Research Question 3: Are there relationships between specific demographic factors and place attachment?
- Research Question 4: Are there differences in dog park usage and place

attachment between visitors to the Orlando dog park and visitors to the Norfolk dog park?

Significance of the Study

The current study is important due to the continued growth and development of dog parks. Several years ago it was estimated that there were 1,100 dog parks in the United States, Canada and Latin America (Shyan et al., 2003). Despite the apparent popularity of dog parks, formal studies on these parks are rare, and place attachment literature with respect to dog parks is nonexistent. Understanding place attachment to dog parks can potentially help in their management by providing an understanding of the relationship between humans and dog park use. Insight into the relationship between dog owners and place attachment to dog parks should assist in the design, development, promotion, and management of dog parks.

A scale to measure place attachment in a recreational setting was developed in 1989 by Williams and Roggenbuck and has been tested for reliability in studies by Moore and Graefe (1994) and Bricker and Kerstetter (2000). The place attachment scale which was used in the current study was adapted to measure place attachment in the visitors to dog parks. This study should contribute to the literature regarding place attachment to recreational settings by (a) employing the scale in a "new" recreation setting, and (b) confirming the reliability of the place attachment scale.

Scope and Limitations/Delimitations of Study

This study is quantitative in nature. Quantitative data should be useful to provide objective evidence related to dog park users' sense of place attachment. Qualitative data could provide a deeper understanding of people's feelings about dog parks, but they were

not collected or examined, as it was not within the scope of the current study. The following are limitations of the current study:

(1) this study was not funded, which limited the number of dog park sites and the choice of locations; and

(2) not all dog parks or dog park users in the two cities were surveyed.

The following are delimitations:

(1) the study was restricted to factors felt to be relevant to place attachment (many other variables not directly associated with place attachment might influence dog park use);

(2) only visitors to the park were surveyed (non-users' opinions of the dog park, regardless of whether they own dogs or not, were not collected in the study; these individuals may have very different perspectives on dog parks, and indeed different views impacting place attachment);

(3) the convenience sampling method used in the current study may also limit generalizability of the data (e.g., it may miss dog owners who do not use dog parks during hot weather because they have long-haired dogs and might wait to use the dog park when it is cooler);

(4) respondents might not have wanted to fill out a survey or might have filled it out incompletely;

(5) the number of days available to collect data were limited by time of day and weather conditions; and

(6) time for data collection was limited to the period of July 2010 – October 2010. The rationale for using two different parks is to make the data less likely to be

specific to one locality, as one dog park is located in the Mid-Atlantic region, and the other is in central Florida. This should enhance data generalizability; however the data obtained cannot necessarily be generalized to other dog parks.

Defining Place Attachment

The concept of place attachment can be best understood by approaching it from a general overview to a more specific definition. The more general concept of space, "... contains place but has no human meaning associated with it" (Rice & Urban, 2006, p. 4). Space is thus a geographic term, but with no human evaluation or interpretation. More specifically "place" "requires human perception, experience, history, and assigned meanings" (Rice & Urban, 2006, p. 4). The concept of sense of place can be scaled over areas as large as a country, as small as a neighborhood, or a more intermediate sized region (Shamai, 1991). Shamai divided the concept of sense of place into three stages: (a) belonging to a place, (b) attachment to a place, and (c) commitment to a place. The recreation literature focused primarily on the "attachment" aspect of these three stages, and conceptualized them as having a functional aspect, known as place dependence, and an emotional aspect, known as place identity (Williams & Roggenbuck, 1989), the specifics of which are discussed in the literature review. The concept of attachment, as it relates to dog parks, is the main focus of this study.

CHAPTER II

LITERATURE REVIEW

This chapter reviews and analyzes the concept of place attachment and its relevance to the recreation field by taking into consideration the two dimensions of place attachment: place dependence and place identity. Relevant empirical and theoretical research ws examined before reviewing the relationship between place attachment and dog parks. This chapter also includes studies of related research problems, methodologies, and conclusions.

The concept of place attachment can be best understood by approaching it from a general overview to a more specific definition. The more general concept of space, "... contains place but has no human meaning associated with it" (Rice & Urban, 2006, p. 4). Space is thus a geographic term, but with no human evaluation or interpretation. More specifically "place" "requires human perception, experience, history, and assigned meanings" (Rice & Urban, 2006, p. 4). The concept of sense of place can be scaled over areas as large as a country, as small as a neighborhood, or a more intermediate sized region (Shamai, 1991). Shamai divided the concept of sense of place into three stages: (a) belonging to a place, (b) attachment to a place, and (c) commitment to a place. The concept of attachment, as it relates to dog parks, is the main focus of this study.

Recreational activities provide an opportunity for people to get away from their routine and enjoy themselves, often outdoors (Moore & Graefe, 1994). Increasingly participation in these activities may include "man's best friend" (Shyan et al., 2003). The enforcement of leash laws has encouraged the establishment of dog parks, providing

opportunities for people and dogs to get outside and enjoy themselves (Shyan et al., 2003). What is it about dog parks, as recreational settings, that draw people in?

Place Attachment

Some authors suggest that people are attracted to places through the creation of meanings for certain places over time. This, in turn, leads to place attachment (Vaske & Kobrin, 2001). Moore and Graefe (1994) defined place attachment in terms of the individual's connection to a specific place:

> Although the concept of attachment to recreation settings is relatively new in the recreation and leisure field, attachment to place has been an important area of inquiry for geographers and others for some time. Many human geographers postulated that through personal attachments to geographically locatable places, people acquire a sense of belonging and purpose that can give meaning to their lives. (p. 18)

Other authors have emphasized the importance of the emotional bond (Mesch, 1998; Vorkinn & Riese, 2001). Hidalgo and Hernandez (2001, p. 274) defined place attachment as a "desire to maintain closeness to the object of attachment." Stedman (2002) emphasized the importance of meaning as the factor that attaches the individual to the site, and he noted that the individual is attached to the meaning rather than to the site itself.

These previously cited authors noted that place attachment is composed of two dimensions: place dependence and place identity. The next two sections discuss where the two dimensions were first found (seminal articles), and how the separate dimensions were conceptualized in consequent research. Following these two sections is a discussion

of how both concepts became subsumed under the single concept of place attachment.

Place dependence. Although introduced into the recreation literature as one aspect of place attachment, place dependence was attributed to the seminal work by Stokols and Shumaker in 1981. White, Virden and van Riper (2008) in a review of previous literature on place attachment captured the ascription to these two authors by noting the following:

> Stokols and Shumaker (1981) suggested that there are two factors that individuals and groups employ to determine place dependency. The first is quality of current place and the second is the relative quality of comparable alternatives. Generic place dependence suggests that an individual or group is attached to a particular category of places for functional reasons. (p. 649)

Williams and Vaske (2003) noted that features and conditions of the natural resource consisting of physical characteristics, such as rock climbing routes or whitewater rapids, serve as functional attachments within place dependence. After summarizing previous research, the concept of place dependence was further defined by Hammitt, Backlund, and Bixler, (2006) as "a functional reliance on a place, reflected in the importance of a place at providing features and conditions that support specific goals and desired activities" (p. 19). It was also noted that place dependence relied on the individual's perception of the quality of a place in reference to the quality of alternate locations that contain similar attributes (Hammitt et al., 2006). "In this context, the value of a setting to the individual is based on specificity, functionality, and satisfaction of a place and its "good-ness" for hiking, fishing, camping, scenic enjoyment and so forth" (Kyle, Graefe, Manning, & Bacon, 2004b, p. 251). One of the goals of the current study is to understand if people actually become dependent on particular dog parks due to their

physical offerings of certain amenities or to the atmosphere the dog parks provide. In short, place dependence is a form of *functional* attachment, which "reflects the importance of a place in providing features and conditions that support specific goals or desired activities" (Williams & Vaske, 2003, p.831).

Place identity. Place identity is a form of *emotional* attachment referring to "a symbolic importance of a place as a repository for emotions and relationships that give meaning and purpose of life" (Williams & Vaske, 2003, p.831). Although Williams and Vaske provide a succinct definition, the notion of place identity has had a developmental history prior to its pairing with place dependence, and can be attributed to Proshansky (1978) who identified it as:

> those dimensions of self that define the individual's personal identity in relation to the physical environment by means of a complex pattern of conscious and unconscious ideas, beliefs, preferences, feelings, values, goals, and behavioral tendencies and skills relevant to this environment." (p. 155)

In more recent literature, place identity has been defined as "a psychological investment with a setting that has developed over time" (Vaske & Kobrin, 2001, p. 17). Furthemore, Proshansky, Fabian, and Kaminoff (1983) elaborated on the concept, and it was noted in the work of Stokol, Shumaker, and Martinez (1983) on places (residential mobility) and well-being. The current study will attempt to determine if such an identity investment is created within dog park users.

Thus, within the environmental (human geography) literature one can see that the concepts of place identity and place dependency both evolved in the early 1980s. Eventually, the concepts of place dependence and place identity were subsumed under the

umbrella of place attachment. The next section considers the development of these two concepts under the conceptualization of place attachment.

Conceptualizing Place Attachment

The relationship that exists between people and places has been extensively studied in a number of fields, including the recreation field (Casakin & Kreitler, 2008). Place attachment was first studied in the fields of geography and environmental psychology (Kyle et al., 2003a). In sociology, the concept has been investigated to uncover how the interpretation of settings relates to social interactions (Williams & Vaske, 2003). In the field of anthropology, place attachment attempts to uncover the cultural implications of specific places. Human geography and environmental psychology consider "sense of place," a concept similar to place attachment, due to personal connections to specific locations (Williams & Vaske, 2003). "Place attachment arises when settings (e.g., local parks) are imbued with meanings that create or enhance one's emotional tie to a natural resource" (Vaske & Kobrin, 2001, p. 17). "Theoretical and empirical evidence suggests that place attachment is multidimensional, hard to define, and comprised of a wide range of constructs embodying both setting variables and personal variables" (Smaldone, Harris, Sanyal, & Lind, 2005, p. 90).

This broad definition raises the question of which dimensions should be considered when discussing place attachment. Place attachment has been subdivided into a number of concepts. For example, place attachment has been conceptualized as place bonding (Hammitt, Backlund, & Bixler, 2006) and sense of place (Jorgensen & Stedman, 2001). Rice and Urban (2006) conceptualized place attachment into three phases. The first is "belonging to a place"; the second is the "attachment to the place"; and the third is

"commitment to a place." Rice and Urban further mentioned previous reports which describe seven levels of place attachment, varying from "no sense of place at all" to "sacrifice for a place." Although multiple conceptualizations exist, Williams and Roggenbuck's 1989 seminal paper at the National Recreation and Park Association's (NRPA) Leisure Research Symposium first introduced the two constructs of place identity and place dependence together as sub-dimensions of place attachment and established query items for its measurement in the context of a leisure setting. The authors generated a survey consisting of 11 items related to place dependence and 16 related to place identity using a 5-point Likert response format. Their survey was administered to 129 students in four universities. The respondents were to envision a "wilderness, backcountry, roadless or natural area" for the purposes of the study.

Bricker & Kerstetter (2000) used a similar instrument that incorporated items (used 15 items total to measure place attachment) from previous studies (Moore & Graefe, 1994; Proshanskyet al., 1983; Stokols & Shumaker, 1981; Williams & Roggenbuck, 1989) in their study of the association of level of specialization and place attachment in whitewater recreationalists on the American River. The authors determined that a high level of specialization was associated with place identity. On the other hand there was no relationship between level of specialization and place dependence. These studies would seem to provide evidence for the validity of the methodology used in the current study.

Kyle et al. (2003a) investigated the factors leading up to the development of place attachment among hikers on the Appalachian Trail. Their study indicated that activity involvement was a predictor of place attachment. They found that the self-expression

and attraction aspects of activity involvement predicted place identity, but only self-expression predicted place dependence. Kyle et al. (2004a) examined the effect of place attachment on the perception of setting density among Appalachian hikers. Their results indicated that individuals with a high degree of place identity tended to feel more crowded, whereas those with high scores on place dependence tended to be less concerned by overcrowding. Casakin and Kreitler (2008), in a study of 36 architectural students in Israel, found that place attachment was related to an individuals' personalities and their information processing tendencies.

As is evident in several of these studies, place attachment is sometimes studied as two distinct dimensions (place dependence *and* place identity, separately, see Bricker & Kerstetter, 2000; Moore & Graefe, 1994; Vaske & Kobrin, 2001; Williams, Patterson, Roggenbuck & Watson, 1992), and as one dimension (place attachment, see Moore & Scott, 2003; Williams & Roggenbuck, 1989). In their seminal work, Williams & Roggenbuck (1989), combined place identity and place dependence to form one additive (or mean/average) scale and reported reliabilities:

> The first factor taps an identity dimension. All of the items address the extent to which using the place is a central aspect of their life. The alpha level for this factor is 0.86. The second factor represents the resource dependence dimension of attachment. The highest loading items suggest an unwillingness to use another site for the activity. That is, attachment has to do with how well the setting functions to do the activity. The internal consistency of this dimension was 0.82 … With the 13 items from [these] two factors combined into one scale; the internal consistency alpha is 0.85. (¶ 7)

Williams and Roggenbuck thus created two subscales (place dependence and place identity), and combined the items which held in these subscales, thus creating a combined place attachment scale. These authors inferred that the overall concept of place attachment was more relevant to individuals' decision-making regarding recreational resource usage than were the more limited subconstructs of place attachment (Brick & Kerstetter, 2000), thus after factor analysis, they created a place attachment scale with 13 items.

Of particular note is that in their original study, Williams and Roggenbuck originally had 27 items, and the 13 items that held represented six items on place identity and seven items on place dependence. Williams and Roggenbuck also identified another separate "attachment" subscale (5 items), and a separate "indifference" scale (9 items). The five items for the separate attachment subscale were not provided in the original study's paper presented at their session at NRPA. The indifference subscale items were presented in their seminal study, but had many factor loadings loading high on several of the subscales. It is important to note this because although this was mentioned in their initial study, consequent studies have not asked about indifference to the resource, probably because there is little empirical evidence to support this notion, and because the questions asked in the original study appear to be reverse-coded questions related to place dependence and place identity.

The two dimensions (place dependence and identity) were subscales which were scored and then added together to give a respondent a "score" for the full attachment scale. Previous studies using a place attachment scale have had a Likert-type response format ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). Additionally, scales

measuring place attachment have varied in terms of items used to measure place attachment from 27 (Williams & Roggenbuck, 1989) to 15 (Brick & Kerstetter, 2000; Moore & Graefe, 1994) to 8 (Moore & Scott, 2003; Kyle et al., 2004b) with alphas ranging from 0.82 to 0.92 for either of the two subscales (place identity and place dependence) or the entire scale (place attachment). Currently, there is no consensus concerning the "best" scale or the appropriate number of items.

Lastly, place attachment, place dependence, and place identity have been independent (Kyle et al., 2004b; Vaske & Kobrin, 2001) and dependent (Moore & Graefe, 1994; Moore & Scott, 2003; Williams et al., 1992) variables in previous research. The nature of dependency varies according to the argument set forth by the researchers. For example, one could argue that place attachment is an independent variable explaining dog park use. The assumption is that either previous visits to other dog parks or identification with the dog park because of its amenities for one's dog could affect more usage (i.e., the stronger one's place attachment, the higher one's park use). However, one could also make the argument that dog park use, previous visits, and proximity to the park increases place attachment.

In summary, there is no consensus on the "correct" number of place attachment items, but there is consensus as to the types of questions asked, and that these questions have been altered to suit the particular "situational" aspects of the resource, in this case dog parks. Because previous studies have utilized a unified (place attachment) and a dual (place identity and place dependence) approach to studying place attachment, it seemed necessary to pick an approach to focus the current study and make the analysis of data and its interpretation more manageable. The current study focuses on a unified approach

to studying the phenomenon. The rationale for this is that Willliams and Roggenbuck's (1989) original conceptualization was that place identity and place dependence have evolved and should be considered "two faces of the same coin." Additionally, since the 1980s, a particular pattern has developed in the literature where the concept of place attachment is measured as two independent measures (identity and dependence) of the same concept (attachment), but discussed as if the two concepts were equivalent, or simply one concept – place attachment. In particular, the more recent literature (see Ednie, Daigle, & Leahy, 2010; Moore & Scott, 2003) discusses place attachment as one concept in their discussions, even when the two concepts were measured as separate constructs. Thus, in the current study place attachment will be treated as one construct for the purposes of this study. Admittedly, this is a minority and atypical view and approach in the general place attachment literature; however, substantively speaking and from a theoretical perspective, place attachment is considered one construct.

Dog Parks

Dog parks are areas of land enclosed by a fence, which are designated specifically for dogs to run free and play with no leash. In general, they occupy at least one acre of land and are commonly part of a larger, already established, park. Some dog parks have separate areas for large (generally over 30 pounds) and small breeds. Dog parks often develop as grassroots projects based on the combined interests of the dog owners in the community (Allen, 2007).

Even though place attachment has been studied in the recreation literature, it has not been studied within the context of dog parks. This situation is not surprising since there is relatively little research literature on dog parks in general. As dog parks become

more numerous, the importance of understanding their meaning to dog park users increases. This knowledge may provide justification for the establishment of more dog parks and allow for better management. What follows is a history of dog parks to give the reader a better context for the growth of dog parks and the need for the current study on dog parks and place attachment.

History of Dog Parks

The world's first dog park was established in Berkley, California in 1989. It was originally called Ohlone Dog Park, but was renamed the Martha Scott Benedict Memorial Park (Allen, 2007). The popularity of dog parks has grown; there are dog parks in all 50 states in the US (dogparkusa.com, 2010). An example of the growth of dog parks is Arlington County, Virginia. In 1980, there was one county dog park (Price, 2006). Currently there are eight dog parks in Arlington County (Community Canine Areas, 2010).

Leash Laws: Motivation for Development of Dog Parks

Laws requiring dogs to be leashed when outdoors exist in all states in the US. There are several different variations of these laws (Wisch, 2010). The website of the Animal Legal and Historical Center of Michigan State University School of Law divides leash laws into seven types. Some states (Alabama, Arizona, Delaware, Massachusetts, Oklahoma, South Carolina, and West Virginia) require leashes in parks and other protected areas. Twelve states (Alaska, Colorado, Massachusetts, Mississippi, Montana, New York, Ohio, Oklahoma, Oregon, Rhode Island, Virginia, and Wyoming) give localities the authority to establish their own leash laws. A few states (Arizona, Iowa, and Ohio) have specific rules about leashing dogs in rabies quarantine areas. Two states

(Connecticut and Louisiana) have specific rules regarding leashes for guide dogs. Some states (California, New York, Michigan, and Arizona) have specific laws for "dangerous" dogs. Some laws (in Connecticut, Delaware, Iowa, Louisiana, Maine, Minnesota, Nebraska, New Hampshire, South Carolina, and Wisconsin) are specifically directed at dogs running at large. Lastly, some states (Kentucky, New York, and North Carolina) prohibit dogs from being at large during certain hours, typically between sunset and sunrise.

These types of laws have been perceived by dog owners as unfairly restricting their animals' ability to exercise freely and to socialize. As such, they have been a motivator for the development of dog parks. Although there are individual opinions regarding dog park benefits (Avrasin, 2004; Bynum, 2005), there has been little formal study of the benefits which dog park users or non-users derive from these facilities (Price, 2006).

Dog Parks: An Opposing View

Despite the growth in dog parks, not all communities perceive them as a benefit (Ingraham, 2009). For example, non-dog owners may question the use of land for dog parks over other potentially more profitable uses (Dyke & Phillips, 2000). Many concerns, such as waste management, noise, aggression, and uncontrollable dogs, have been raised in relation to dog parks (Nemiroff & Patterson, 2007; Shyan, Fortune, & King, 2003). Some critics question the value of the dog park for the animals themselves. For example, Frawley, a professional dog trainer, feels that dog parks are well intentioned but can be harmful. He feels that owners should pay attention to their dogs rather than socialize with other people. He emphasizes dogs' natural pack instincts. Owners should

function as the pack leader, but in an uncontrolled dog park other dogs assume this role and can cause confusion for the animals. He feels that dog parks do not sufficiently screen out aggressive dogs and that dogfights are inevitable (Frawley, 2010).

Place Attachment and Recreation's Role regarding Dog Parks

Because place attachment studies involving dog parks have not been reported, other studies in recreation may provide some insight into attachment to place within the recreation field. Examples of such studies include whitewater rafting (Bricker & Kerstetter, 2000), hiking the Appalachian Trail (Kyle et al., 2003a) and the conversion of rails to trails (Moore & Graefe, 1994).

Focusing on the subject of rails to trails, Moore and Graefe (1994) reported results that were consistent with the literature suggesting that "place dependence seemed to be rooted in how well the setting facilitated users' particular activities, and place identity focused on the importance of the setting independent of their activities" (p. 27). The current study will attempt to determine if there are similar motivations among dog park visitors. It seems likely that the different settings of dog parks would have variable effects on users, similar to what was concluded by Moore and Graefe (1994), who found that differences among trails affected users' perceptions.

In addition, Bricker and Kerstetter (2000) conducted a somewhat analogous study, a main objective of which was to examine whitewater rafters and their level of attachment to the American River. Overall, results indicated that the rafters were committed to the river, associating valued meanings with the river as well as displaying preference to be on the river longer when given the opportunity. In addition the authors found that place identity, not place dependence, was correlated with degree of activity

specialization. Such data should be useful for management of this recreational resource. The findings provide evidence that such an attachment can exist in relation to a recreational resource and suggest that similar attachment might apply to dog parks. However, the study did not specifically ask about the relationship between place attachment and usage, and place attachment was conceived as a dependent variable.

Another study conducted by Kyle et al. (2003b) found that attachment by recreationists to specific recreation settings can prove to be a problem as well as an asset in the management of these settings. For example, it was found that visitors to the Appalachian Trail who were connected more through place identity rather than place dependence were more willing to pay fees associated with environmental education and practices associated with sustainability, whereas visitors who had more dependence, rather than identity, to the setting were more supportive of paying fees associated with facility development and improvement. These findings provide information of considerable value in the management of such trails. It seems likely that similar information would be an asset to the management of dog parks. Understanding what aspects of a dog park create more of a sense of attachment may allow management to better allocate funds in order to provide the most desired amenities. Additionally, although these previously cited studies assessed place identity and place dependence as constructs, the studies (a) operationalized dependency and identity variables differently, and (b) reported similar reliabilities to those of Williams and Roggenbuck on place identity, place dependence, and place attachment.

Summary

According to Payton, Fulton and Anderson (2005), "in most cases a complex relationship exists between recreationists and a recreation area" (p. 513). With dog parks continuing to be an expanding recreation resource, it seems timely to investigate these relationships. The previous studies by Moore and Graefe (1994) and Bricker and Kerstetter (2000) provide precedents for the study of place attachment within the recreation field and for the use of the place attachment scale developed by Williams and Roggenbuck (1989). The current study seeks to find a relationship between place attachment and dog park use. Interestingly, these previously mentioned studies do not necessarily focus on demographic differences, but rather tend to focus on different activity groups (e.g., walkers vs. bicyclists vs. runners in Moore & Scott, 2003 or kayakers vs. rafters in Bricker & Kerstetter), or relationship to other concepts (e.g., perceived crowding, use conflict in Kyle et al. 2004b and environmental behavior in Vaske & Kobrin, 2001).

According to Kyle, et al. (2004a, 2004b), past studies have shown "that both involvement and place attachment are positively correlated with past experience" (2004b, p. 210). Although Kyle et al's 2004(b) study used the dual approach; they provided evidence and support for place attachment affecting usage. Gaps within the literature underscore a lack of useful knowledge about dog parks and, more importantly to this study, display the lack of application of place attachment to dog parks in particular. Therefore, this study should be a useful addition to the place attachment literature generally, and more specifically in regard to dog parks.

CHAPTER III

METHODOLOGY

The following chapter will explain the overall methods used in this study. In particular, the regions being studied will be identified and the overall research design including sample, instrumentation, procedures, and data analysis will be discussed.

Population

The population for this study consists of visitors to dog parks. Given the inability to sample more broadly, the sampling frame for this study consisted of visitors who were at least 18 years old and who visited one of the two study parks (Gold Star Dog Park in Norfolk, Virginia and Dr. Phillips Dog Park in Orlando, Florida) during the period of July through October, 2010. The Norfolk site was chosen due to its proximity to the residence of the researcher in Norfolk, and the Orlando site was chosen because of its proximity to temporary housing available for the researcher in Orlando.

Gold Star Dog Park

In Norfolk, Virginia, there are 12 dog parks (Norfolk's Dog Parks, 2010). The Gold Star Dog Park is located within the Colonial Place subdivision, an urban residential area adjacent to a playground and an elementary school. The park was developed as a resident-initiated, grassroots project and is maintained by volunteers. According to Norfolk's Department of Recreation, Parks, and Open Space website, in order to establish a dog park in the city, funds for materials and installation, which include utilities, must be raised entirely by the community, and a majority vote of approval must be given by

members of the neighborhood at a predetermined civic league meeting for the neighborhood (Norfolk's Dog Parks, 2010). The park does not separate large and small breed dogs. Its amenities include fresh water, a few toys, waste bags, and park benches. It is enclosed by chain-link fencing. Part of it is covered by grass and part by compacted soil. There are posted rules prohibiting aggressive dogs, requiring the collection of dogs' feces, and requiring the leashing of dogs while entering and leaving the park. The only available parking is street parking. Gold Star Dog Park is open until nightfall.

Dr. Phillips Dog Park

In Orlando, there are 8 dog parks, and 1 dog-friendly park (Off-Leach Dog Parks in Orlando, FL, US, 2010). Dr. Phillips Dog Park is a facility of the Orange County Parks and Recreation Service in the Dr. Phillips neighborhood of Orlando, Florida, a suburban residential region. It is maintained by the city of Orlando. The park is located within a larger park for humans, adjacent to Dr. Phillips Elementary School. The park has basketball courts and a small water park for children. The dog park is separated into two sections, one for larger breeds (30 or more pounds) and the other for smaller breeds (less than 30 pounds). It is covered by grass. There are scattered pine trees, but little shade. Dr. Phillips Dog Park provides fresh water, toys, park benches, and waste bags. The park has specific hours for daytime operation.

Sample

Surveys were obtained via convenience sampling on weekdays and weekends throughout the dog parks' hours of operation. All visitors to the parks were invited to participate in the survey. As noted in the pilot study below, all participants preferred to fill out the survey while they were at the park, but self-addressed stamped envelopes were

available for anyone who might have preferred to mail in his or her surveys. In order to increase representativeness, surveying was performed at random times during the day, and a schedule was established to alternate between weekdays and weekends. Surveys were performed in a non-replacement manner (i.e., no more than one survey per individual). A total of 250 surveys were collected (125 surveys at each park).

Instrumentation

The research instrument consisted of a self-administered or face-to-face survey focusing on the association between place attachment and dog park use. Items for both the place identity and place dependency dimensions were adapted from the work of Williams and Roggenbuck (1989). The "Value of the park to me" (place dependence) variables were intended to measure the degree to which the park fulfills certain functional needs of the dog owner. The "My feelings about the dog park" variables (place identity) were intended to measure the emotional connection between the visitor and the park. The demographic variables were designed to measure the attributes of the park visitors.

More specifically, the survey used in this study (see Appendix B) contained four parts with a total of 40 items: "Value of the park to me" (Place Dependence - 13 items), "My feelings about the dog park" (Place Identity - 14 items), "Park use" (7 items), and "Demographics" (6 items). The first two sections asked for responses on a five-point Likert scale measuring the two dimensions of place attachment, namely place identity and place dependence. Respondents indicated their opinion, ranging from "Strongly Agree," coded as 5 to "Strongly Disagree," coded as 1. Although Williams and Roggenbuck (1989) established the first list of items measuring place identity and place attachment, other items related to place attachment have been created by previous

researchers that were specifically related to the recreation resource (Bricker and Kerstetter, 2000; Moore and Graefe, 1994). For the purposes of the current study, the original conceptual items from Williams and Roggenbuck were used, with modifications and adaptations being made to suit the specifics related to dog parks.

The third section requested respondents to indicate their patterns of use of the dog park, such as how far they live from the dog park, how many dogs they bring, how many times a week they use the dog park, how long they stay at the dog park, whether they use any other dog parks, and open-ended questions requesting suggestions for improvements to the dog park. The fourth section asked for demographic information, such as income, gender, education level, marital status, and age.

Pilot Test

The study instrument, which was approved by the Human Subjects Review Board at Old Dominion University (see Appendix A), and which was based on the expert advice provided by Dr. Laurlyn Harmon from George Mason University, was used in a pilot test in the Gold Star Dog Park. In this pilot study of 45 individuals, no one refused participation, and all participants preferred to fill out the survey while they were at the park. No one had any questions about the design of the study or how to indicate his or her responses. When respondents were asked if there were any questions regarding the design of the survey, or any questions which seemed difficult or ambiguous, they answered that there were no difficult or ambiguous questions and that the wording was simple and easy to read. The survey took approximately five minutes to complete. Subsequent to the pilot test, questions were added based on analogous questions in previously published surveys. The data from the pilot test was not further analyzed.

Design and Procedures

The research design involves survey research. The design was advantageous for several reasons. First, the face to face interview increases the likelihood that respondents would want to respond because the research is "right there." Second, it allows the researcher to immediately respond to any clarifications about the research of the survey items. Third, there is no "list" of dog park users, and as such, the best approach is to be onsite. This study is a cross-sectional study exploring two dog parks. Respondents will not be asked to participate in follow up studies, or focus groups.

The primary research question (Research Question 1) lends itself to a correlational approach between two main variables of interest – place attachment and park usage – and their relationship. Additionally causal comparative analyses are performed between various demographic variables (independent variables) on place attachment (dependent variable) or park usage (dependent variable), thereby addressing Research Questions 2 and 3. Lastly, causal comparative analyses are performed between the two dog parks (location variable) and place attachment (dependent variable) or park usage (dependent variable), thereby addressing Research Question 4. All analyses are performed at the 95% confidence interval ($p < .05$).

The current study used a convenience sampling method. Surveys were obtained on weekdays and weekends throughout the dog parks' hours of operation. Visitors to the dog parks were approached individually and were asked if they would be willing to fill out a survey regarding the dog park. They were told that the survey was intended to gather data for a research project which was part of a post-graduate program at Old Dominion University and that it would take approximately five minutes to complete.

Consent was assumed if respondents were over the age of 18 and wanted to participate after the purpose of the study was mentioned and that answers would remain anonymous and confidential, as all answers would be reported in aggregate form.

The researcher wore a name tag identifying him as an ODU graduate student, and if participants asked for additional credentials, a copy of the Human Subjects Review Committee approval letter was available. As with the pilot study, all participants preferred to fill out the survey while they were at the dog parks, but self-addressed stamped envelopes were available in case anyone preferred to mail in his or her surveys. Surveys were presented on clipboards and pens were provided. In order to increase representativeness, surveying was performed at random times during the day, and a schedule was established to alternate between weekdays and weekends. In the event of rain, surveys were collected the following day at the same time as was scheduled for the previous cancelled day. Surveys were performed in a non-replacement manner (i.e., no more than one survey per individual).

Statistical Techniques and Data Analysis

The following statistical techniques were conducted to answer the research questions: descriptive analyses, exploratory factor analyses, reliability analyses, correlation analyses, regression analyses, *t*-tests, and ANOVAs.

Descriptive analyses. Basic descriptive analyses that include frequencies, percentages, means, medians, and standard deviations will be reported. Descriptive statistics will help the reader get a "feel" for the respondents. Additionally, descriptive statistics could help inform how best to cluster groups in categorical variables based on frequency counts for ANOVAs.

Reliability analysis. Reliability analyses using Chronbach's alpha were performed on each component to determine if the deletion of any items would increase scale reliability. Although other reliability checks besides Chronbach's alpha exist, Chronbach's alpha was used for its simplicity, and for point of comparison with previous studies, as there was no access to LISREL or AMOS for this thesis project. The standardized item alpha is sufficient if sample sizes are large (over 200) (Tanaka, 1987). After factor analyses, and upon completion of the reliability analyses, composite variables (scaled variables, factors, constructs, dimensions) were created for place identity, place dependence, and place attachment, in keeping with the literature.

Correlation and Regression Analysis

Prior to running a regression analysis, a correlation analysis was run. Once association is determined (correlation, r), then a regression analysis (causation/prediction, r^2) can be run. Correlations between place identity, place dependence, place attachment, weekly use, and length of use over time were assessed. Any significant correlations were then assessed in a consequent regression analysis. If found statistically significant the point biserial correlation coefficient squared (r^2_{pb}) was calculated to assess variance explained. If more than one independent variable is looked at as causing or influencing a dependent variable, one can assess the relative impact of each independent variable by looking at the beta weights in the regression (multiple) analysis.

T-tests. T-tests are inferential statistics that look at differences between the means of two groups (Heiman, 2011). Two group averages relevant to this study are demographic (men vs. women) and geographic (Orlando vs. Norfolk).

Analysis of Variance (ANOVA)

Analysis of variance is the most commonly used inferential statistic to determine if there are statistically significant differences among three or more means. ANOVAs assume that all observations are independent of each other, that the populations under study are normally distributed, and that the populations have equal variances (Heiman). Similar analyses in terms of demographic and geographic factors can be performed. If found statistically significant, post-hoc analyses and eta squared (to assess variance explained) should be performed.

Data Analysis

Initial analyses of descriptive statistics on demographics were performed to identify outliers or non-normal data. This examination preceded the use of the statistical techniques noted above. Below is information on this study's Research Questions (see p. 4) and the identification of which statistical techniques were used to analyze the data in order to address each question.

Research Question 1: The first question explores the relationship between place attachment and use. For this question, a correlation analysis was run to look at place identity, place dependence, place attachment and dog park use. If relationships were found to be significant, a regression analysis was performed. The independent variable would be place attachment, or place identity and place dependence, and the dependent variable would be dog park use.

Research Questions 2, 3 and 4: Both Research Questions 2 and 3 are related. The only difference is that in Questions 2 and 3 t-tests and ANOVAs looked at the entire database, across dog parks, whereas Question 4 looked at specific differences between

the two dog parks. T-tests assessed the difference between Orlando and Norfolk. Place attachment is the dependent variable in Question 4, where comparisons can be made between Orlando and Norfolk (i.e., city of dog park location is the independent variable) in terms of differences between mean scores on dog park use and place attachment.

CHAPTER IV

RESULTS AND DISCUSSION

Surveys were obtained from 250 individuals; 125 surveys were obtained at each dog park. The raw data were analyzed using the Statistical Package for the Social Sciences (SPSS 17.0). Descriptive statistics were generated from the data set. These descriptive statistics are specified in Table 1.

Descriptive Statistics

Table 1 shows that there were generally more male respondents than females; the majority of Norfolk respondents were male (56.9%), but the opposite was seen among the Orlando respondents (46.8% male). Approximately half of the respondents were married. Their incomes were distributed as noted in Table 1. Most of them had at least a college degree. The vast majority were Caucasian. Additionally, the mean age of the dog park visitors was in the mid-thirties. Although convenience sampling was used at both sites, the respondents are fairly similar from a demographic standpoint. As such, unless comparing the two parks on a specific variable, the remaining descriptive statistics will refer to all respondents.

Respondents visited the parks an average of 2.74 (SD=2.14) times per week (median was "2"); responses ranged from "0" times per week (i.e., went every two weeks, or less, frequently) to 14 times per week (or twice a day, each day of the week). The highest frequency of visitation per week was once per week (34.6% of respondents). They indicated that on average they had been visiting the dog parks for 14.88 (SD=15.87) months (median was 12 months); responses ranged from "0" (i.e., have been going less than one month to the park) to 120 months (10 years). The highest frequency of length of

Table 1. *Descriptive Statistics for Demographic Variables*

	Percentages		
Variable	Total	Orlando	Norfolk
Gender	(N=247)	(n=124)	(n=123)
Male	51.8%	46.8%	56.9%
Female	48.2	53.2	43.1
Marital Status	(N=238)	(n=118)	(n=120)
Single	39.5%	39.8%	39.2%
Married	47.9	51.7	44.2
Divorced	5.9	4.2	7.5
Other	6.7	4.2	9.2
Household Income	(N=230)	(n=114)	(n=116)
Low (under $50, 000)	40.4%	40.4%	40.5%
Mid ($50,001-75,000)	22.6	27.2	18.1
High $(75,001 and over)	36.9	32.4	41.3
Education Level	(N=246)	(n=123)	(n=123)
Less than college degree	27.6%	19.5%	29.3%
Baccalaureate degree	44.7	52.8	36.6
Post-Baccalaureate degree	27.6	21.2	34.1
Race/Ethnicity	(N=245)	(n=122)	(n=123)
Caucasian/White	82.9%	81.1%	84.6%
Hispanic/Latino	5.3%	7.4	3.3
Black/African American	5.3%	6.6	4.1
Pacific Islander	2.0%	1.6	2.4
Multi-Ethnic/Mixed	2.0%	0.8	3.3
Asian	1.2%	1.6	0.8
Other	1.2%	0.8	1.6
Age in Years	(N=215)	(n=109)	(n=106)
Mean (SD)	34.9 (12.4)	34.7 (11.8)	35 2 (13.0)
Median	31	31	32
Range	18-76	18-76	18-72

visitation reported was 24 months (14.5%). The "use profile" would indicate that the dog parks typically have visitors who use them 1-3 times per week and have a mixture of relatively new and old users/visitors in terms of how long they have been coming to the dog parks.

The average time it took to get to the dog park was 8.60 (SD=22.27) minutes (median was 5 minutes); responses ranged from 6 seconds to 200 minutes. The most frequently reported time it took to get to the dog park was 5 minutes (16.2%). Their average length of stay was 62.80 (SD=28.99) minutes, and the range was from one minute to 190 minutes). Nearly half of respondents utilized the dog park for 60 minutes (48.1%). Although the mean number of dogs brought to the park was 1.35 (SD=0.70), the majority of respondents brought a single dog (72.8%). These descriptive statistics would indicate that most respondents live within close proximity to the dog park, and that they stay at the dog park for about an hour, typically bringing one dog with them.

Reliability Analysis for Place Attachment

All 27 items were entered into a reliability analysis using Chronbach's alpha. Chronbach's alpha ranges from 0 to 1, where "0" is representative of a perfectly unreliable scale, and "1" is representative of a perfectly reliable scale (Tabachnick & Fiddel, 2006). Items were deleted if the Place Attachment (PLATT) Scale could be made more reliable with its deletion (i.e., Chronbach's alpha increases with consequent deletions of an item). The final reliability analysis consisted of 20 items (7 items deleted to increase Chronbach's alpha) (see Table 2). The Chronbach's alpha for the 20 items was 0.91, and the overall mean is 3.64 (SD=0.88). PLATT was found to be highly reliable.

Table 2. *Items Used for Scale Construction of Place Attachment (PLATT) (N=232)*

Items[a]		M	SD	h^b
	Place Dependence (α=.91)			
LRG DOG SM DOG	It is important that large dogs are separated from small dogs	3.25	1.45	
PARK TO ESCAPE	I enjoy coming to the park in order to escape for a while	3.90	.99	
OPP W PPL SIM INTRSTS	I feel that this park provides a good opportunity to interact with people with similar interests		4.09	.88
NO OTHER SUBSTIT	I would not substitute any other area for doing what I do here	3.40	1.10	.88
NO COMPARISON	No other place can compare to this area	3.25	1.20	.86
MORE SATISF HERE	I get more satisfaction out of visiting this place than any other.	3.50	1.07	.85
PARK BEST 4 PET	This park is the best place for what I like to do with my pet	3.80	0.96	.74
ACTIVITIES ENJOYABLE	The activities available at this park are more enjoyable than they would be at another similar facility	3.42	1.00	.68
PLAY UNLEASHED	The opportunity to play unleashed is important to my dog's well being	4.70	.62	.88
SOCIALIZATION OF PET	The socialization this park provides for my pet is important for its wellbeing	4.62	.66	.84
DOG EXER HEALTH	The type of exercise my dog(s) can have in the park is important for their health	4.59	.47	.77
FEATURES 4 HUMANS	The features of the park for humans (such as seating, shade, parking, and landscaping) are important to me	4.16	.89	.84
FEATURES 4 DOGS	The features of the park for humans (such as shade, water, toys, and obstacle courses) are important to me	4.42	.77	.79
INTRSTD IN OTHERS THINK	I'm very interested in what others think of this dog park	2.86	1.11	
ANGRY IF TAKE AWAY	I would be angry if they were to take this dog park away	4.24	1.00	
DOG REACT TO PRK	The way my dog reacts to this park makes me feel better	4.05	.89	
ORGANIZ SCHEDULE	I tend to organize my schedule around visiting this park	3.06	1.23	
CRITICIZES PARK	When someone criticizes this dog park it's like a personal insult	2.52	1.02	.62
CONNECTED 2 PPL	I believe I'm very connected to the people who use this dog park	2.93	1.08	.64
DPRK MY OWN	This dog park feels as if it were my own park	3.37	1.09	.80
SPND TIME W FRIENDS	The park has provided an opportunity to spend time with new or old friends	3.49	1.11	.66
MEANS A LOT TO ME	This park means a lot to me	3.57	1.06	.87
ATTACHED TO PRK	I am very attached to this park	3.33	1.14	.86
ID STRONGLY W PRK	I identify strongly with this park	3.21	1.16	.85
PRK VERY SPECIAL	This park is very special to me	3.33	1.11	.87
FAVORITE PLACES TO BE	This park is one of my favorite places to visit	3.50	1.03	.75
FEEL HAPPY AT PRK	I feel happy when I visit this park	3.82	.90	.65

[a] – underlined items were not used in the scale construction

[b] – factor loading only presented for those items included in the scale

Research Question 1: Is there a relationship between place attachment and dog park usage?

In order to answer Question 1, a correlation analysis was performed between the variables of PLATT, and TMSWK (park usage as defined by times visited per week) to see if there was an association between these variables as a first step towards a regression analysis. If there are associations that are significant, then the next step is to run a regression analysis in order to explore causality, prediction, or explanation between the variables.

Correlation Analysis for Question 1

The Pearson correlation coefficient was calculated to determine the extent of association between park usage (TMSWK) and PLATT. The *r*-value for the association between TMSWK and PLATT is $r = 0.24$ at $p < .001$. This indicates a statistically significant correlation between park usage and place attachment.

Regression Analysis for Question 1

A regression analysis, using the PLATT construct as the independent variable (Table 3), yielded a beta of 0.24 at $p = .0001$. This indicates that PLATT is a significant predictor of park use. The adjusted r^2 of .06 indicates that using this model improves predictability of park usage (times per week) approximately 6%. Although not a very large prediction power, it is nonetheless statistically significant. Furthermore, these findings suggest that PLATT should be used when predicting park use, rather than its separate subcomponents (more on this in the discussion).

Table 3. *Regression Analysis with Park Use as Dependent Variable*

Variable	*β*	*p-value*
PLATT	.24	.0001****
r^2 (adj.)	.06***	
F	14.98***	

* $p < 0.05$ two-tail test; ** $p < 0.01$ two-tail test: *** $p < 0.001$ two-tail test
**** $p < 0.0001$ two-tail test

Research Question 2: Are there relationships between demographic factors and dog park use?

This question was answered by applying ANOVAs and t-tests to the analysis of the three demographic variables of gender, income, and marital status as they related to dog park use. These specific demographic variables were selected as points of comparison with Price's (2006) previous thesis work on dog parks. The income classification and the marital status classification also follow the same breakdown as Price's thesis work.

ANOVA and T-test Analyses on Demographic Variables and Park Use

Gender. The two-tailed t-test was used to determine if there was a significant difference in park use between male and female respondents. There was no significant difference between male and female respondents (M= 2.62, SD= 1.84) and (M= 2.88, SD= 2.42), respectively, t (239) = 1.97, p = .34.

Income. An ANOVA was used to test the differences in average dog park use (times per week) among the three household income groups. As a point of comparison, the household income groups were clustered according to how Price (2006) clustered the groups (see Table 2). There were no significant differences between the low, mid, and

high household income groups (M= 3.66, SD = .64; M= 3.62, SD = .70; M= 3.64, SD = 0.66, respectively), F (2,227) = 1.47, p = .233.

Marital Status. The marital status categories were organized to reflect Price's classification of marital status. Respondents who were "separated" were joined with those who were divorced, and respondents who indicated "widowed" were grouped together with "other." Single respondents used the park between 1 (or fewer) and 8 times per week; married respondents used the park between 1 (or fewer); and 14 times per week; divorced respondents used the dog park between 1 and 14 times per week; and "others" used the park between 1 and 10 times per week.

An ANOVA was used to test the statistical significance of differences in dog park use (times per week) between single, married, divorced, and "other" dog park users (M= 2.60, SD = 1.67; M= 2.64, SD = 2.08; M = 4.50, SD = 3.44; M= 3.06, SD = 3.06, respectively). There were significant differences between these groups, F (3, 228) = 3.56, p = .015. Tukey's HSD test indicated that the only significant difference in mean park usage was between "divorced" and the averages of single and married respondents. This difference accounted for .05 of the variance in dog park use (using η^2).

Research Question 3: Are there relationships between demographic factors and place attachment?

This question was answered by applying ANOVAs and t-tests to the analysis of the three demographic variables of gender, income, and marital status as they relate to PLATT.

ANOVA and T-test Analyses on Demographic Variables and PLATT

Gender. For the variable of gender the PLATT score in females (M = 3.79, SD =

.67) was significantly higher than for males ($M = 3.53$, $SD = .64$) $p = .002$, with equal variances assumed, t (245) = -3.10, $p = .34$. The effect size of this difference was r^2_{pb} = .04, indicating that information on gender provides a 4% improvement in prediction of PLATT.

Income. An ANOVA was used to test the statistical significance of differences in PLATT between the three levels of household income. No significant differences were found between these groups, F (2, 227) = .071, $p = .931$.

Marital status. An ANOVA was used to test the statistical significance of differences in PLATT between single, married, divorced, and "other" dog park users. There were no significant differences between these groups, F (3, 234) = 1.47, $p = .22$.

Research Question 4: Are there differences in dog park usage and place attachment between visitors to the Orlando dog park compared to the Norfolk dog park?

For dog park usage (times per week) a significant difference was found between Orlando dog park users and Norfolk dog park users; specifically, Orlando respondents had a significantly lower usage score ($M = 2.14$, $SD = 1.73$) than Norfolk respondents ($M = 3.32$, $SD = 2.33$) $p < .0001$ with equal variances assumed. The effect size of this difference was $r^2_{pb} = .08$, indicating that information on visitor location provides an 8% improvement in prediction of dog park use.

Lastly, a t-test was used to look for differences in PLATT and dog park usage between the Norfolk and Orlando respondents. The PLATT score for Orlando respondents ($M = 3.77$, $SD = .65$) was significantly higher than that of Norfolk respondents ($M = 3.55$, $SD = .66$) $p = .01$ with equal variances assumed. The effect size

of this difference was $r^2_{pb} = .03$, indicating that information on visitor location provides a 3% improvement in prediction of PLATT.

Discussion of Findings

Research Question 1. The results of the study regarding the relation of place attachment to frequency of use are compatible with those of previously reported studies in the recreational field. As reviewed earlier, most published studies of place attachment to recreational sites maintain the traditional division of the concept into place identity and place dependence and draw conclusions based on their separate scores. The current study, however, argued for a combined construct of place attachment (PLATT).

Although this combined scoring seems not to be commonly used in previous studies, Williams and Roggenbuck's (1989) original conceptualization of the place attachment construct was to combine both the identity dimension and the dependence dimension as two halves of one scale. The only study found that used all items as one place attachment construct was Moore and Scott's (2003) study. .

The study conducted by Ednie et al. (2010) followed the pattern of scoring the separate constructs of place identity and place dependence. When the results of their research were discussed, however, the authors referred to high, medium, and low attachment groupings without providing separate scores for identity and dependence. This would appear to be the functional equivalent of the construct PLATT used in this study. Having noted this, one could advocate more use of the combined approach for place attachment versus the separate approach of place identity and place dependence. It also stands to reason that if they are both dimensions of place attachment, that they can be viewed together as one construct.

The concept of place attachment has assumed a central place in studies of recreational resources. In some correlation and regression analyses it has been designated the independent variable (Kyle et al., 2004b; Vaske & Kobrin, 2001) and in some the dependent variable (Moore & Graefe, 1994; Moore & Scott, 2003; Williams et al., 1992). In this study PLATT was used as an independent variable for the correlation and regression analyses. When used as an independent variable, place attachment (PLATT) was found to be a significant predictor of dog park usage (TMSWK).

Research Questions 2 and 3. A number of studies of place attachment have collected data on income levels on their subjects (Bricker & Kerstetter, 2000, Kyle et al., 2003a, Kyle et al., 2003b, and Kyle et al., 2004b), however these studies did not mention any attempt to examine the relationship between income levels and resource usage, including a study that found an association between place attachment and attitudes towards fees and spending preferences (Kyle et al., 2004b). A study of Appalachian Trail hikers (Kyle et al., 2003a) showed a relationship between income level and type of hiker.

In the current study, income levels were not a significant predictor of park usage or of place attachment. It should be noted that the dog parks in this study had no admission cost. Some parks do charge an annual fee and it is possible that this could have an effect on the income distribution of users of these dog parks. The free-of-charge dog parks may encourage people from different socioeconomic strata to interact around their common interest in dogs, an opportunity which might not otherwise be available. The findings of the current study are comparable to Price's (2006) findings regarding dog park use and benefits. Price found no relationship between income groups and average park use.

Marital status was found to have a significant impact on dog park usage, Specifically those who indicated "divorced" as their marital status had a significantly higher dog park usage (times per week) than those who were single, married or other. This finding is consistent with previous dog park research, which found that divorced individuals had a higher dog park usage score than other marital status groups (Price, 2006). It was speculated that dog parks may function as vehicles where people can meet and interact with those of similar interests in a manner similar to the role played by urban community gardens (Schmelzkopf, 1996).

Previous studies have considered the role of gender in public recreation and related social equity issues (Shinew, Anderson, & Arnold, 2000). In was noted that women participate more in activities related to childcare, family participation, and other social groups (Ho, Sasidharan, Elmendorf, Willits, Graefe, & Godbey, 2005). On the other hand, men were more likely to participate in active, physical leisure, individually or in groups. Women tend to prefer a managed and built environment, whereas men prefer more remote and natural settings (Hutchinson, 1994). In the current study gender had no significant impact on dog park usage. This result is in keeping with previous research which showed little effect of gender on facility usage (Ho et al., 2005). On the other hand, unlike the current study, Price (2006) did find a difference between men and women in dog park usage. Previous studies generally do not seem to report any possible relationship between gender and place attachment; however Kyle et al. (2004a) did report that males were more attached to an Appalachian Trail environment than were females. The current found the opposite, namely that female were more attached to dog parks than were males. This difference appears to be in keeping with the concept of gender

preferences as discussed by Hutchinson (1994) and Ho et al. (2005). Thus, more research is needed to discern the role that gender might play in dog parks. The higher place attachment score for women is compatible with their presumed preference for a managed resource.

Research Question 4. Finally, the respondents in the Orlando dog park had a higher level of attachment than those in Norfolk, but the Norfolk respondents used the dog park more frequently than did the Florida users. One can speculate that the Orlando dog park visitors might have less opportunity to visit the dog park than the Norfolk visitors, resulting is a greater appreciation of the facility when they are able to use it. This speculation seems reasonable, in that the Norfolk dog park is located within a residential neighborhood and is within easy walking distance of homes and apartments, whereas the Orlando dog park is located within a larger human park adjacent to a school, and is easily accessible only by automobile. Another factor potentially related to the reduced usage pattern of the Orlando dog park compared to the Norfolk dog park might be that the Orlando dog park is more likely to attract tourists traveling with dogs than would be the case in Norfolk. Unfortunately, there was no question on the survey regarding resident/non-resident status (or resident vs. tourist).

CHAPTER V

CONCLUSIONS

Summary

The current study sought answers to four research questions (see below). It contributes to the literature on place attachment in several ways. First, this study confirmed the saliency of the place attachment construct in a dog park context. Second, this study argues for a joint conceptualization of place attachment, as Williams and Roggenbuck (1989) originally conceived it, rather than looking at the two subdimensions of place identity and place dependence in isolation.

Second, the current study begins to fill a void in park and recreation studies by introducing dog parks as an under-researched resource. Additionally, the current study has applied place attachment theory to dog parks – something not previously noted in the park and recreation literature. The summary of the findings related to each research question is as follows:

- Research Question 1: Is there a relationship between place attachment and dog park usage? *The results of this study indicate that there is a relationship between place attachment and dog park usage.*
- Research Question 2: Are there relationships between demographic factors and dog park usage? *The current study indicates that marital status has a significant relationship to dog park usage, but household income and gender do not.*
- Research Question 3: Are there relationships between demographic factors and place attachment? *The current study indicates that gender has a significant relationship to place attachment, but household income and marital status do not.*

- Research Question 4: Are there differences in dog park usage and place attachment between visitors to the Orlando dog park compared to the Norfolk dog park? *The current study indicates that there were significant differences in both park usage and place attachment between visitors to the Orlando dog park as compared to visitors to the Norfolk dog park.*

Practical Implications

Place attachment studies have been used to measure the importance that visitors attach to particular sites within a recreational area. In the study by Moore and Scott (2003), 438 users of a trail within a park near Cleveland, Ohio were surveyed to determine levels of attachment to the trail and to the park in general. The authors found that place attachment was related to frequency of park use, and the authors were unable to distinguish place dependence and place identity as independent factors. The factor most associated with place attachment was personal commitment to specific recreational activities. In the current study a somewhat analogous situation involves survey questions regarding the perceived importance of specific dog park features.

The four highest scoring items on the place dependence questions were those regarding the value of exercise for pets (M=4.62, SD=.66), socialization of pets (M=4.59, SD=.47), park features for humans (M=4.42, SD=.77), and park features for dogs (M=4.16, SD=.89). The importance of park features, as indicated in this study, is clearly relevant for the planning and maintenance of dog parks. Such information emphasizes that studies of this type can be of considerable value in guiding the managers of recreational facilities (Smaldone et al., 2005; Moore & Scott, 2003; Ednie et al., 2010; Gunderson & Watson, 2007; Payton et al., 2005).

The current study seeks to contribute some practical applications or suggestions based on the findings. First, this study found that visitors who use dog parks develop place attachment, and their degree of attachment predicts their level of usage of the parks. Park professionals seeking to work with a grass roots initiative could use this information by developing amenities (functional aspect of PLATT) and creating social activities such as "dog parties" or "meet and greet" days (emotional aspect of PLATT) that would establish "seeds" at the development stages of the park. Additionally, involving the dog park users in the decision-making will obviously create more attachment, thereby leading to potentially more usage. If a dog park is already established, assessing specific areas of attachment could tell you where improvement is needed in order to increase attachment to the park.

Furthermore females develop more place attachment than males. Additionally, this study confirmed that divorced individuals used the park more than those of other marital status groups. One might speculate that divorced individuals are more motivated than others to establish new interpersonal relationships. Thus park professionals should not assume that all users are the same or "just dog users." It is clear that some groups use it more than others and this information could be used for marketing the benefits. A survey or employee could ask users what benefits would make one feel like it is "really their park." And the manager could particularly focus on male responses to try to increase male attendance, or focus on other marital groups besides divorcees to also encourage more usage.

As noted earlier, and in Table 3, the items that generated the highest place attachment scores were those which were viewed as benefits to pets, namely exercise and

socialization. Another high place attachment score related to feelings of happiness felt by the pet owners. Dog owners who frequent these parks seem to place a high value on the benefits their pets derive and secondarily develop a sense of happiness when they see that their pets are benefiting. Knowing this information, dog park managers could partner with local dog store owners, or national chains such as PetSmart™, and seek information sessions onsite for vaccinations, or funding for fencing, or collaborative marketing ventures where pet (or pet-friendly) stores can "adopt a dog park". In much the same way that regular parks are cleaned, and supported, dog parks could also have advocates and supporters of their own from both the municipal and business community.

Future Studies and Theoretical Implications

Despite this study there continues to be very little research data on dog parks, even though they are increasingly popular. There are a number of areas amenable to additional dog park studies. Given the wide geographic distribution of dog parks in the USA and abroad there is clearly a need to examine them more thoroughly. The data generated in this study may not be applicable to areas which have different geography, weather, or populations (urban vs. rural). The dog parks in this study were free of charge. Different results might be anticipated for parks which charge an admission fee; in particular fees might affect the income profile of visitors. It would be interesting to study visitors' fee tolerance relative to park features. Similarly, the relationship between place attachment to the dog parks, and visitors' willing to donate time and effort for maintenance, should be investigated. Other potential studies might examine the economic impacts and costs of maintaining dog parks and their effect on local real estate values. This study and others have concentrated on the opinions of dog park users, but

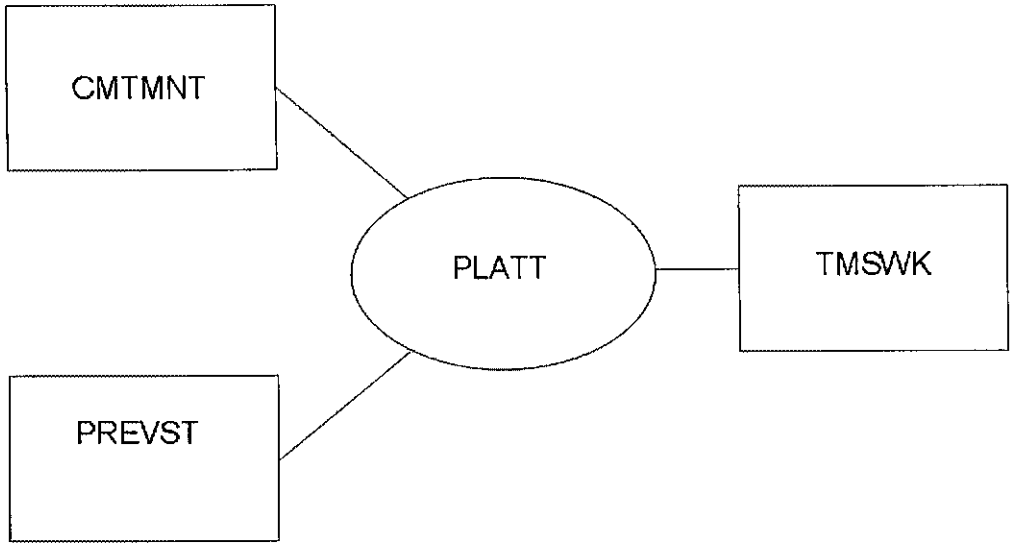
equally as important are the feelings of non-users of the parks, who may have very different opinions of their value. A comparison between visitors to the dog parks who are residents compared to out-of-town visitors might be useful. Studies to investigate the robusticity of dog parks in terms of limitations of the number of people or dogs they can handle would be useful. Finally, the thoughts of people who are professionally involved in the care of dogs (e.g. veterinarians and dog trainers) should be examined to see if they view parks differently from the general public.

The current study advocates the position of looking at place attachment within a broader scope in which it is both an independent and a dependent variable.
As was mentioned earlier, other studies have placed PLATT as a dependent variable. Smaldone et al. (2005), in a study of place attachment issues in Grand Teton National Park, found that there was a relationship between place attachment and length of association, as was seen in the current study. Moore & Scott (2003), in their study of a suburban trail near Cleveland, Ohio, found that a number of factors were associated with place attachment, including frequency of trail use over time (visits per year) and commitment to use of the resource. Ednie et al. (2010), in their study of recreational activities on the coast of Maine, found that there was a relationship between experience use history and place attachment as defined by scores of place identity and place dependence. Similar findings were reported by Hammitt et al. (2006) who found that experience use history was related to overall "bonding."

Given the review of literature, the variables of how often one uses the resource or is committed (use intensity) to the resource (CMTMNT) and the number of previous visits or a length of time to the resource (PREVST) are other variables found to predict

PLATT. Future studies need explore these additional relationships in more detail, and perhaps re-conceptualize place attachment as a mediator variable between previous visits and commitment to the resource and the end goal – in this case dog park usage (see Figure 1).

Figure 1. *Conceptualized Relationships among Place Attachment (PLATT), Dog Park Usage (TMSWK), User Commitment (CMTMNT), and Duration of Dog Park Usage (PRVST).*



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APPENDIX A

HUMAN SUBJECTS REVIEW COMMITTEE APPROVAL

June 1, 2010 Proposal Number __**200902143**__

Professor Gómez:

Your proposal submission titled, "**Place Attachment and Dog Parks**" has been deemed EXEMPT from IRB review by the Human Subjects Review Committee of the Darden College of Education. If any changes occur, especially methodological, notify the Chair of the DCOE HSRC, and supply any required addenda requested of you by the Chair. You may begin your research.

We have approved your request to pursue this proposal indefinitely, provided no modifications occur. Also note that if you are funded externally for this project in the future, you will likely have to submit to the University IRB for their approval as well.

PRIOR TO THE START OF YOUR STUDY, **you must send a signed and dated hardcopy of your exemption application submission to the address below.** Thank you.

Danica Hays, Ph.D.
Associate Professor
Human Subjects Review Committee, DCOE
Old Dominion University
Norfolk, VA 23529-0196
757-683-6309 (ph)
757-683-4270 (fx)

APPENDIX B

DOG PARK SURVEY
(Note: Not to Scale)

A Survey of Dog Owner's Motivations for Dog Park Usage
Recreation & Tourism Studies Program - Old Dominion University

Date: _____ **Survey Location:** _____

INSTRUCTIONS

This survey is being conducted as a research project in the Department of Human Movement Sciences at Old Dominion University in Norfolk, Virginia. The purpose of the study is to better understand the interest, perceptions, motivations, and general opinions of people who use dog parks. The information that you provide will be confidential (it cannot be traced back to you) and anonymous (your name will not be asked for). Your participation in this study is voluntary, and at any time you may choose not to participate. Please take your time answering the questions. The questionnaire should take approximately 5-7 minutes to complete.

SECTION I: Value of the park to me

Directions: *Please indicate the extent to which you feel the statement reflects your opinion on the following topics by placing a " ✓ or "X" in the box along the scale from 1-5, with 1 being strongly disagree and 5 being strongly agree.*

	Strongly Disagree ← 1	2	3	4	5 → Strongly Agree
The type of exercise my dog(s) can have in the park is important for their health.	☐	☐	☐	☐	☐
This park is the best place for what I like to do with my pet.	☐	☐	☐	☐	☐
I get more satisfaction out of visiting this place than any other.	☐	☐	☐	☐	☐
I would not substitute any other area for doing what I do here.	☐	☐	☐	☐	☐
No other place can compare to this area.	☐	☐	☐	☐	☐
The opportunity to play unleashed is important to my dog's well being.	☐	☐	☐	☐	☐
The socialization this park provides for my pet is important for its wellbeing.	☐	☐	☐	☐	☐
I feel that this park provides a good opportunity to interact with people with similar interests.	☐	☐	☐	☐	☐
The features of the park **for humans** (such as seating, shade, parking, and landscaping) are important to me.	☐	☐	☐	☐	☐
The features of the park **for dogs** (such as shade, water, toys, and obstacle courses) are important to me.	☐	☐	☐	☐	☐
The activities available at this park are more enjoyable than they would be at any other similar facility.	☐	☐	☐	☐	☐
It is important that large dogs are separated from small dogs.	☐	☐	☐	☐	☐
I enjoy coming to the park in order to escape for a while.	☐	☐	☐	☐	☐

SECTION II: My feelings about the dog park.

Directions: *Please indicate the extent to which you feel the statement reflects your opinion on the following topics by placing a " ✓ or "X" in the box along the scale from 1-5, with 1 being strongly disagree and 5 being strongly agree.*

	Strongly Disagree ← 1	2	3	4	5 → Strongly Agree
When someone criticizes this dog park it's like a personal insult.	☐	☐	☐	☐	☐
I'm very interested in what others think of this dog park.	☐	☐	☐	☐	☐
I believe I'm very connected to the people who use this dog park.	☐	☐	☐	☐	☐
I would be angry if they were to take this dog park away.	☐	☐	☐	☐	☐
This dog park feels as if it were my own park.	☐	☐	☐	☐	☐
The park has provided an opportunity to spend time with new or old friends.	☐	☐	☐	☐	☐
This park means a lot to me.	☐	☐	☐	☐	☐
I am very attached to this park.	☐	☐	☐	☐	☐
I identify strongly with this park.	☐	☐	☐	☐	☐

	Strongly Disagree ← 1	2	3	4	→ Strongly Agree 5
This park is very special to me.	☐	☐	☐	☐	☐
The way my dog reacts to this park makes me feel better.	☐	☐	☐	☐	☐
This park is one of my favorite places to visit.	☐	☐	☐	☐	☐
I feel happy when I visit this park	☐	☐	☐	☐	☐
I tend to organize my schedule around visiting this park.	☐	☐	☐	☐	☐

SECTION III: Park Use

How many times a week do you use this park? _____ Time(s) a week
How long have you been using the park? _____ Year(s) _____ Month(s)
Approximately how far from the park do you live? _____ Mile (s)
How long do you generally stay at the park? _____Hour(s) _____Min(s)
How many dog(s) do you generally bring to this park when you visit? ☐1 ☐2 ☐3 ☐4 ☐____Dogs
Do you use other dog parks? ☐Yes ☐No
What TOP THREE things would you like to see added to the dog park or taken away from the dog park, and what are your favorite features or amenities of the park?

Added	Taken away	Feature/Amenities
_____	_____	_____
_____	_____	_____
_____	_____	_____

SECTION IV: DEMOGRAPHICS

This information will be kept in the strictest confidence and used for statistical purposes only

Are you? ☐Male ☐Female
Are you? ☐Single ☐ Married ☐Separated ☐ Divorced ☐ Widowed ☐ Other _____
What is your age? _____

Which statement best describes your total 2009 annual **household** income? (Check **only** one)

☐under $24,000 ☐$24,001 - $35,000 ☐$35,001 - $50,000
☐$50,001 - $75,000 ☐$75,001 - $100,000 ☐$100,001 - $125,000
☐$125,001 - $150,000 ☐above $150,001

Please indicate the highest level of education you have obtained? (Check **only** one)

☐less than High School Graduate ☐Some College ☐Some Graduate School
☐High School Graduate ☐College Degree ☐Advanced Degree
☐Technical School

Which of the following best describes your race or ethnic origin (Check **only** one)

☐Caucasian/White ☐Black/African American ☐Native Hawaiian/Pacific Islander ☐Asian
☐Hispanic/Latino ☐American Indian/Alaskan Native ☐Multi-ethnic/Mixed ☐Other _____

That completes our survey. Thank you very much for your assistance!

IF YOU NEED MORE INFORMATION, PLEASE CONTACT:

Dr. Edwin Gomez, Associate Professor or Mr. Andrew Parker, Graduate Student, Recreation & Tourism Studies Program, Old Dominion University, 2010 Student Recreation Center, Norfolk, VA 23529. Phone (757) 683-4995, email: aparker@odu.edu

APPENDIX C

VITA

Andrew P. Pariser

Old Dominion University

Department of Human Movement Sciences

Recreation and Tourism Studies

SRC Building

Norfolk Virginia 23529

Education

December 2010	Master of Science in Education Old Dominion Univeristy Norfolk, Virginia
May 2009	Bachelor of Science in Education Old Dominion Univeristy Norfolk, Virginia

Professional Experience

09/09- 05/10	Graduate Assistant, Old Dominion University. Assisted the Recreation and Tourism Department with setting up and grading online classes. Helped with Human Subjects Review at Old Dominion University. Assisted with the accreditation visit for the program at Old Dominion University.
01/08- 04/09	Intern Event Planner, Old Dominion University. Assisted event coordinators in setting up events for the president of Old Dominion University. Also set up my own events on the campus. January-April 2009.
08/07- 01/08	Front Desk Walt Disney World College Program. Checked in and out guests at the Yacht and Beach Resort. Dealt with guest issues and concerns. Assisted guests over the phone and monitored the enjoyment of the guest experience. August-January 2007-2008.