University of Alberta

The Relationship between Rock Climbers and Climbing Places

by

Cory Adam Kulczycki

A thesis submitted to the Faculty of Graduate Studies and Research
in partial fulfillment of the requirements for the degree of

Doctor of Philosophy

Faculty of Physical Education and Recreation

Fall 2013
Edmonton, Alberta

Dedication

To the memory of my wife, Carrie A. Kulczycki, thank you for your love and support.

Abstract

Human interactions transform recreation and sport spaces into meaningful places. Textures, sights, and sounds are some of the elements that contribute to place meanings (Tuan, 1975). Beyond these sensory characteristics, a complex range of interconnected factors exist. While place meaning and place attachment have been studied in built and natural environments, there has been little comparative research between these settings in the context of recreation and sport. Therefore, the purpose of this study was to investigate how a group of 21 rock climbers from Western Canada experienced natural outdoor and indoor climbing sites by addressing the question: "What transforms a climbing space into a climbing place?"

Insight into rock climbers' relationships with natural and indoor climbing sites was gained through an interpretive inquiry which helped the researcher understand the meanings, experiences, and behaviours of the climbers from their perspectives (Schwandt, 2001; Tribe, 2004; Williams, 2000). Semi-structured in-depth interviews were digitally recorded, transcribed verbatim and analyzed to identify emergent themes (Patton, 2002).

Analysis of the outdoor climbing narratives identified eight place themes which were grouped into three dimensions. This was followed by an analysis of the indoor climbing narratives which distinguished nine themes which were also grouped into three dimensions. Finally, the dissertation concludes with a discussion of the scholarly insights through consideration of the dimensions of

place attachment and theories inclusive of suggestions for future place and rock climbing research.

Exploring the way rock climbers interact in two very different types of settings (indoor and outdoor) contributes to a better understanding of place meaning and place attachment in the recreation and sport context both in theory and practice. The fundamental implication of the study findings for place theory is despite the similarity in terms of the physical mechanics of climbing in various settings, place meanings will vary depending on whether that activity takes place outdoors or indoors. For example, while similarities exist between both climbing settings, place meanings tend to vary between settings based on the nature of the social interactions that occur in each place. While the outdoor social interactions were group exclusive, the indoor social interactions were inclusive of all climbers. Practical recommendations are provided for site managers and rock climbers to further enhance the climbing experience and establishment of place meanings. For example, the findings suggest that large active social areas should be distanced from outdoor climbing routes but should be located close to indoor climbing routes.

Acknowledgements

The seven years that span from the beginning through to the completion of my PhD program contained some high and low periods. I would like to acknowledge the following people, if not by name but in spirit, for their contribution, support, and guidance through the time surrounding this PhD and dissertation writing process.

Dr. Tom Hinch (Supervisor) for his support, patience, and guidance through this PhD and through our time together. I am grateful for everything you have provided and introduced to me.

My thesis committee consisting of Dr. Jim Denison and Dr. Elizabeth Halpenny. Dr. Denison, thank you for your insight into the different perspectives regarding my topic and methodology; you provided many constructive comments which built a strong research project and dissertation. Dr. Halpenny, thank you for your valuable role within my dissertation and my growth as an academic and researcher. Thank you for your insight and opening your research projects to include me.

Thank you to Dr. Glen Hvenegaard and Dr. Anna Thompson, who provided their time and expertise as the external examiners for the dissertation.

Thank you to Dr. Karen Fox and Dr. Stewart Petersen for chairing my candidacy and oral examinations, respectively.

A heart-felt thank you to family and friends who were there to help my family and I through our difficult days. There are so many who have supported us

so I would like to say, “Thank you everyone!” To single out one person, thank you mom for giving so much of your love and time.

Lastly, to my son, Everett Kulczycki, thank you for your patience while I completed my PhD dissertation. I hope that one day you will see the benefit of all of the time and energy that has been put into achieving an education. Everett, most of all, thank you for showing me and reminding me that there is always time to play!

Table of Contents

List of Tables

List of Figures

Glossary of Climbing Terms

Belay: The safety system of ropes, equipment (e.g., carabineers, bolts) and the belayer that provide protection in the event that the climber falls (Lewis & Cauthorn, 2000).

Belayer: Individual who feeds the rope for the rock climber (Lewis & Cauthorn, 2000).

Beta: Detailed information about a climb shared between climbers (Samet, 2013).

Bolt: A metal bolt placed into the rock which secures an anchor through which protection can be placed (Lewis & Cauthorn, 2000).

Carabineer: A climbing tool used for "belaying, rappelling, clipping into safety anchors, securing the rope to points of protection and . . . other tasks" (Wick, 1997, p. 127).

Crack climbing: Using natural cracks in the rock for foot and handholds (Lewis & Cauthorn, 2000).

Crag: An outdoor climbing area.

Crash pad: A mattress placed at the bottom of a problem and used to protect the climber in the event of a fall (MEC, 2013).

Crimp: A very small handhold (Samet, 2013).

Crux: The hardest section of a route or problem or for a multi-pitch climb the hardest pitch (Lewis & Cauthorn, 2000).

Highball: A bouldering problem above average height (Schmid, 2010).

Jug: A large easy to grasp handhold (Samet, 2013).

Multi-pitch: A route comprised of many pitches which is completed in sections (Lewis & Cauthorn, 2000).

Münter Hitch: a hitch formed in the rope which is placed on a carabineer to provide friction for belaying, rappelling (Wick, 1997).

Pitch: The length of a route when comparatively measured to the length of one standard climbing rope. (Lewis & Cauthorn, 2000; Samet, 2013).

Sloper: "A downsloping handhold that relies on skin friction and an open-hand grip" (Samet, 2013).

Top out boulders: Boulder upon which the climb is completed by exiting on top of the boulder.

Volume: Typically a feature added to indoor climbing walls to add dimensionality to the wall.

V-scale system: A climbing grading system that is comparable to the YDS but is typically used for bouldering problems (Graydon & Hanson, 1997). The scale ranges from V0 to V14 (Lewis & Cauthorn, 2000).

Yosmite Decimal System (YDS): Is the standard scale upon which rock climbs are graded according to the climbs difficulty (Graydon & Hanson, 1997).

Chapter One: Introduction

Introduction

Spaces used for recreation, leisure, and sports often evolve into special places as participants interact with the various dimensions of the site (e.g., physical, sensory, and social). These interactions infuse spaces with meaning and in doing so transform them into places. Meanings associated with space are linked to "such elements as distinctive odours, textural and visual qualities in the environment, seasonal changes of temperature and color, how they look . . . , their location . . . , and additional bits of indirect knowledge" (Tuan, 1975, p. 152-153). Recreation, leisure, and sport activities seem to provide unique opportunities to foster place meaning. Place meaning is developed through experience and interactions with spatial elements that create emotions, connections, and identities of and within geographical locations (Tuan, 1975). Such meanings can be acquired through recreation (e.g., Kruger, 2006), sport (e.g., Bale & Vertinsky, 2004) and tourism pursuits (Crouch, 2000). Examples of recreation places range from vast open areas such as sports fields and natural parks, to those found in the built environment, such as homes, sports arenas, and stadiums (Bale, 2003; Bale & Vertinsky, 2004). All such places are characterized by meanings and interactions facilitated through various activities.

Relevance of the Research

Researchers have not fully explored the association between place, place attachment, and leisure or sporting places, so it is useful to consider this relationship in more depth. This research addresses this goal in the context of

outdoor and indoor rock climbing. Rock climbing is a classic activity in relation to place and place attachment. In natural settings, climbers interact with the rock face (e.g., cliff) and surrounding environment to create experiences and these experiences influence perceptions of the culture, the climber, the climb, and the environment (Rossiter, 2007). Indoor climbing sites are often used to introduce people to the sport and feature purposefully built spaces with changing routes and features (Attarian, 1999). Indoor climbing appears to be an activity that people are pursing separately or in conjunction with outdoor climbing. This research explores place meaning within these contrasting physical environments.

Personal relevance.

My life and experiences as a rock climber began in Thunder Bay, Ontario, while I was an undergraduate student. The area around Thunder Bay contained interesting cliffs and routes, which I view as physical and functional climbing locations. However, when reflecting upon my personal experience as a climber, I realized that I eventually became attached to other outdoor climbing areas and climbing gyms in New Zealand and North America. For example, while living in Dunedin, New Zealand, I spent a substantial amount of time bouldering in a small climbing gym. I was dependent on the gym for my urban climbing activities and I identified with the gym and the people who climbed there. Later, while living in Winnipeg, Manitoba, I practiced both sport climbing and bouldering in a gym where I became known as a volunteer route setter who designed challenging climbing routes. The routes I set were my creations and I took pride in them. I was identified by my routes through their distinctive style and in part, because I

would sign-off on my creations, similar to an artist signing a painting. My friends and I often referred to this gym as "ours" or our "home" gym because it was the base for our weekly interactions (e.g., climbing and post-climbing coffee sessions). Early place attachment literature (e.g., Relph, 1976; Tuan, 1975, 1991) focuses on attachment to the home and the Winnipeg climbing gym was my home for urban climbing. Furthermore, the Winnipeg climbing gym became a place that fulfilled my social and physical needs through my interaction with other climbers and through climbing. I was attached to this place in that I was dependent on it and I derived an important part of my identity through my activities at the gym.

In regards to outdoor climbing areas, one site that I became particularly attached to was Paynes Ford, New Zealand. At Paynes Ford, my interaction with friends and the physical environment helped to create a positive bond between the place and myself. I have a special connection with that place through my experiences of climbing, socializing, and exploring the crag/site and the surrounding area. I remember the smells of the food cooking, the tent and the salt water near the cliffs, the feel of the rock, the owners of the local restaurant who invited us to their end of the season social event, the heat of the sun, and warmth and humidity of the evenings. Furthermore, I remember the routes I climbed, the routes I could not climb, and the climbs that call me back. My interactions with the dimensions (i.e., physical, cultural, social, sensory) of Paynes Ford formed the basis for my place meanings and attachment to this climbing place.

These perceptions of place attachment associated with climbing are a result of my understanding of the academic literature and my involvement with the sport. My climbing background has influenced my interest in place meaning and attachment, specifically in terms of the ways that climbers interact with the natural and built environments.

Place and sport relevance.

Spaces become endowed with meanings when used by people (Kruger, 2006). Special place meanings have long been associated with the activities of mountaineering and rock climbing where participants explain and describe their interactions with climbing places. Furthermore, rock climbing is an increasingly popular activity and the number of indoor climbing participants is also growing (Attarian, 1999; The Industry Outdoor Foundation, 2011). For example " . . . 8.6m Americans went indoor climbing in 2003, an advance of over 80% in five years, while the number of dedicated indoor climbing facilities has risen from 89 to 400 in the past decade" (Glendinning, 2005). My personal experiences are only one example of how climbers interact with a multitude of climbing places. While in Winnipeg, I noticed many people learning to climb indoors but I never truly considered the impact that an increased interest in indoor climbing would have on climbing in general. By examining the concept of place in both indoor and outdoor rock climbing settings, another layer of theoretical and practical understanding will potentially emerge. Furthermore, understanding place (Kruger, 2006) and place attachment (Kyle, Graefe, & Manning, 2004c) has direct implications for resource managers who are designing, operating, and evaluating

climbing sites. This final point is important because there are increasing restrictions around access to natural rock climbing sites. For example, The Access Fund (n.d.) reports that "Roughly 1 in 5 climbing areas are threatened by access issues." Such restrictions are exemplified by the 2008 consideration to close the Niagara Glen in Ontario to bouldering (Ontarioaccesscoalition.com, 2008)[1] and the recent Cuban government ban of rock climbing in the mountains of Western Cuba (Gripped.com, n.d.). Research on place and place attachment of rock climbers can help resource managers determine how to meet the needs of rock climbers and other recreationists who use the surrounding spaces.

Research Questions

The intent of this research is to gain a deeper understanding of how climbers infuse space with meaning. By studying the interactions of outdoor and indoor climbers with their climbing places, one can gain insight into the way that meaningful places are constructed and created. Of particular interest, are the similarities and differences in the way place meaning is created for participants in a similar sport activity (i.e., rock climbing) but in dramatically different settings (natural and built environments).

Climbing site continuum.

Rock climbing is an activity that occurs in both outdoor and indoor settings. These settings can be perceived as a continuum where one end of the spectrum includes unclimbable unprepared rock cliffs, while the other includes fully enclosed climbing sites comprised of artificial materials and designs (Figure

[1] The Niagara Glen is currently open to bouldering through a bouldering permit program (Niagara Parks, n.d.).

1.1). Moving one degree inward from the unprepared rock surface we have a "cleaned" rock setting. Cleaning the rock surface involves removing loose rock and stones, mosses, and other objects not suitable for rock climbing. While the rock surface is "cleaned" for climbing, it is still considered more natural than an artificial wall or surface.

The outdoor setting can contain naturally occurring rock surfaces suitable for climbing and human made climbing facilities. However, climbers in the outdoor setting generally climb on natural rock cliffs, outcroppings and boulders, so for the purposes of this study, these sites will be referred to as "outdoor climbing sites." Since artificial rock surfaces have been created for use indoors and outdoors, this study will use the term "indoor climbing sites" to refer to the climbing typically done on artificial built climbing walls that resemble cliffs inside built facilities (i.e., indoors).

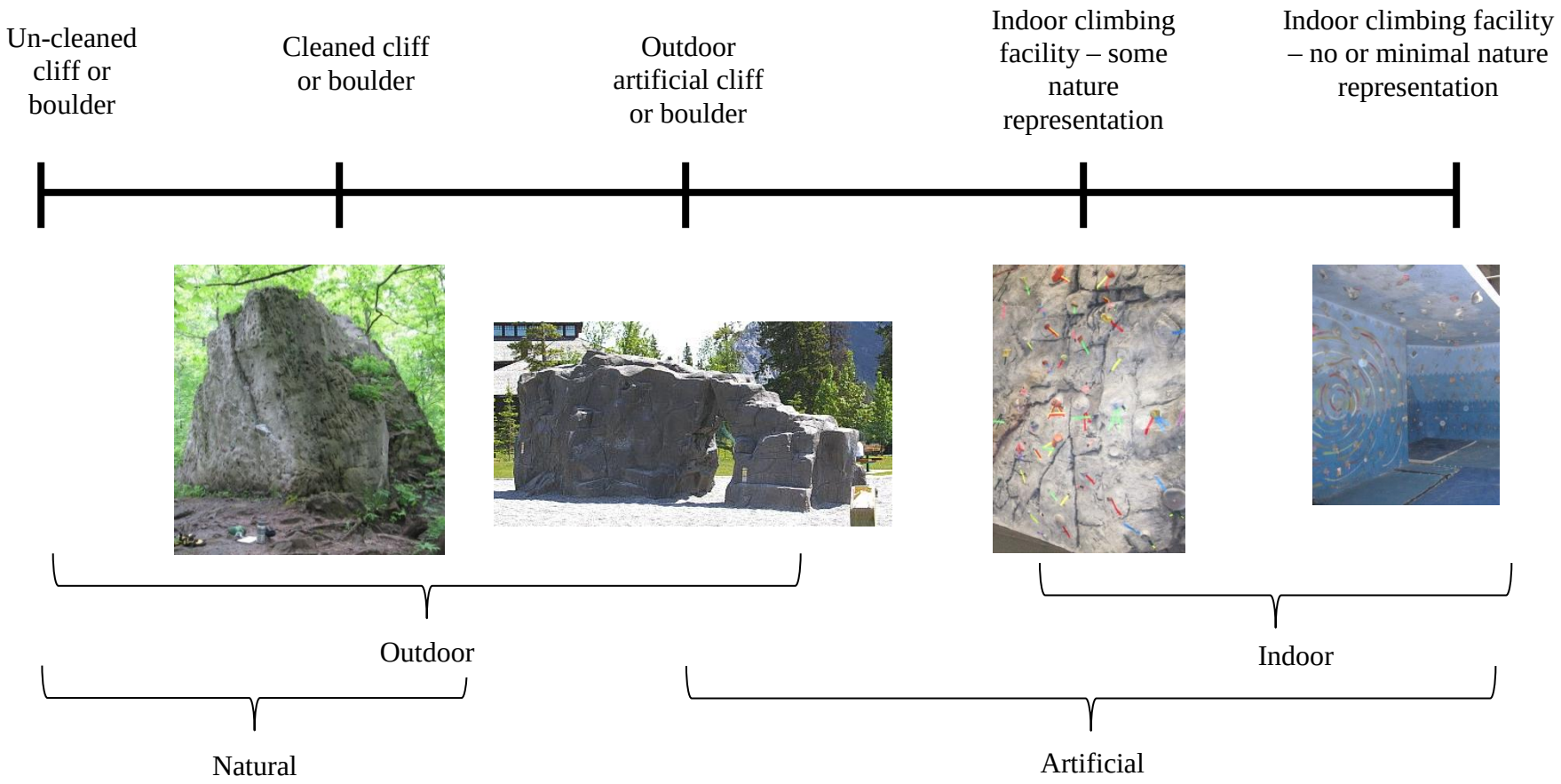


Figure 1.1. Climbing Site Continuum.

Guiding/ primary research question.

While rock climbing has traditionally been considered an outdoor activity taking place on naturally occurring cliffs, it is increasingly occurring in indoor sites. Historically, indoor climbing was considered as a form of physical conditioning and training for outdoor climbing (Eden & Barratt, 2010; Mittelstaedt, 1997). However, there is growing interest in indoor rock climbing for its own sake (Attarian, 1999). The guiding research question, "What transforms a climbing space into a climbing place?" is therefore very relevant in both settings. This research question is addressed through a set of two sub-questions that have guided the research process and interview questions (Figure 1.2). This research then explores the relationship that climbers have with their climbing place; thereby furthering the understanding of place meaning and place attachment from the perspective of rock climbers.

Research sub-questions.

The research question and sub-questions address specific gaps in the literature (as discussed in Chapter Two). The sub-questions provide a framework and direction for the research and reflect the key dimensions/components of the study. Each sub-question (Figure 1.2) elaborates on specific elements pertaining to the relationship between the climbers, the places they climb, and the interactions between the climbers and their climbing places.

The first sub-question, "What meanings are ascribed to outdoor climbing sites?" is important because responses to this question provided insight into how the characteristics of a climbing site influence the meanings that the climbers

form about their outdoor climbing places. It is important to understand what gives a climbing site meaning and what might influence the climbers' attachment to the places they climb. The second sub-question asked, "What meanings are ascribed to indoor climbing sites?" The specific focus on the indoor climbing environment through climbers' perceptions of artificial and natural sites enables comparability across the different settings. Some climbers have demonstrated preferences for either indoor or outdoor environments, but it is useful to inquire why and how this preference evolves through questions such as: How is it described?; and is this preference influenced by the physical dimensions and/or social atmosphere within climbing gyms?

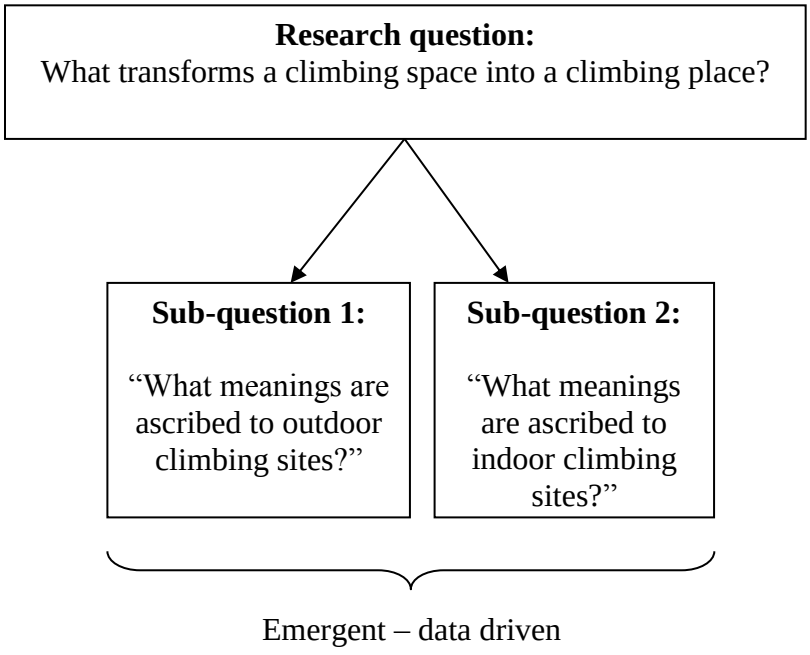


Figure 1.2. Research Question and Sub-questions.

These research questions are relevant both theoretically and practically. Theoretical insight into place meaning and place attachment is developed by examining a growing sport population which pursues activities in two very distinct environments (natural and indoor). In particular insight will be gained in regard to the transformations of space into place that take place in rock climbing practices. Practically, the results provide a deeper understanding about the sport of climbing for individuals managing and operating climbing areas and facilities. Furthermore, place meanings reveal information about who, what, where, and why the climbers were climbing in specific settings. Research has shown that once people are attached to a place they are more likely to have a vested interest in that place's management and use (Smaldone, Harris, & Sanyal, 2005a). Therefore, place attachment to climbing areas and facilities may lead to a greater appreciation and care for those climbing places.

Dissertation Format

This dissertation is divided into six chapters. This first chapter has briefly discussed the context of the research within place theory and outlined the primary and secondary research questions. A literature review of place theory and place attachment along with an overview of rock climbing and the trend of bringing the sport indoors comprises Chapter Two. Chapter Three explains the methodological elements of the research. Chapter Four presents the results and discussion of the first sub-question: "What meanings are ascribed to outdoor climbing sites?" while Chapter Five presents an analysis of the data on indoor rock climbing in response to the second sub-question: "What meanings are

ascribed to indoor climbing sites?" Chapter Six concludes the dissertation by summarizing the difference between outdoor and indoor climbing meanings and presenting insights into theories that can further our understanding of place, place attachment and rock climbing. The chapter also includes a discussion of study limitations and suggestions for future research.

Chapter Two: Literature Review

Introduction

When recreation and sport spaces are infused with meaning they become *places* for the people who make use of them. Place attachment evolves as a relationship between an individual and a specific place to which an attraction is felt. Often place meanings and place attachment form through repeated interactions with and at a specific place. Therefore, place and place attachment are useful conceptual frameworks to gain insight into the recreational and sporting sites of various activities. The purpose of this review is to examine the general conceptualization of place and place attachment that is presented in the academic literature and which is relevant to this research project (Figure 2.1) with a focus on place attachment within outdoor recreation and environmental psychology. This review and interpretation is required since the concept "has been researched quite broadly" (Scannell & Gifford, 2010, p. 1) and previous researchers have provided multiple definitions of place attachment. A synopsis of place meaning and place attachment is followed by consideration of one particular context in which place attachment is formulated: the sport of rock climbing. An overview of the sport of rock climbing contextualizes place research within a population of rock climbers; furthermore, a description of the evolution of rock climbing highlights the growing trend of adapting or simulating outdoor sport locations in indoor facilities. The chapter concludes with an assessment of place research related to rock climbing in terms of the current gaps in place research along with

the rationale for using place and place attachment as a theoretical perspective for understanding the ways that climbers interact with their climbing sites.

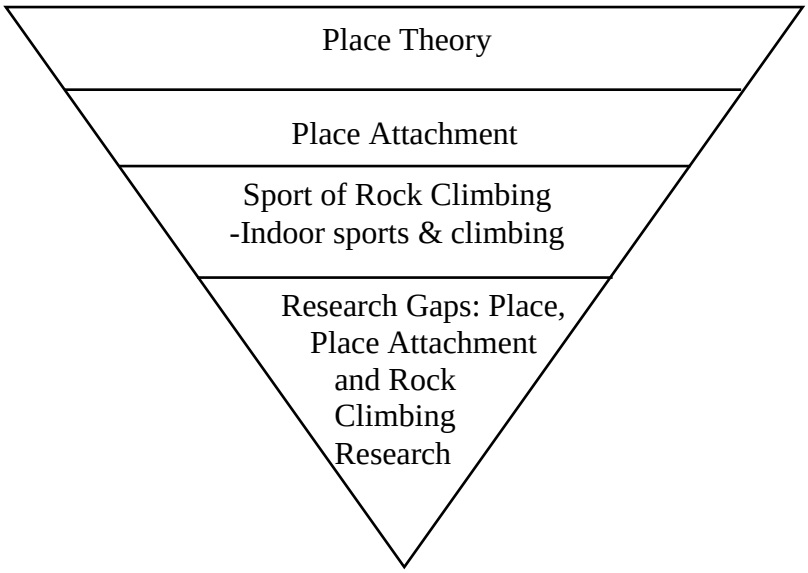


Figure 2.1. Literature Review Framework.

Place Theory

Crouch (2000) explains that, "[s]pace can be a background, a context, a 'given' objective component of leisure and tourism" (p. 64), whereas places contain meanings that are interpreted and explained by people using those spaces (Kruger, 2006). Places have been defined in terms of associated meanings that evolve through the interactions (e.g., recreational activities) with/in that space (Crouch, 2000; Kruger, 2006). Furthermore, a space becomes a place through an individual's interactions with the components of the space, thereby creating deeper experiences and meanings (Crouch, 2000; Kruger, 2006).

Research into place meaning has often included discussions about sense of place and place attachment; however these two concepts are distinct from place meaning. Sense of place is an overarching and broad term used to describe peoples' connection to specific places (Farnum, Hall, & Kruger, 2005; Jorgensen & Stedman, 2001) but it does not focus specifically on the meanings associated with places. In contrast, place attachment is an emotional response to a place both influencing, and influenced by, place meanings (Farnum et al., 2005; Smale, 2006). Similarly "place attachment might address to a degree which places are important, but not why or how they are important" (Smale, 2006, p. 378-379). Therefore, it is important to investigate place meanings while also attempting to understand the place attachment of climbers.

This dissertation focuses on the components and characteristics of place meaning for rock climbers based on Tuan's (1975) argument that, "Place is a center of meaning constructed by experience" (p. 152). Place meanings "are complex and contested" because they are both individual and shared and reflect a wide range of perspectives and beliefs about the places people use (Williams, 2008, p. 19). Different people and groups apply different meanings to place (Davenport, Baker, Leahy, & Anderson, 2010). These meanings are established through the use of a specific place (Fishwick & Vining, 1992) and as this use continues, meanings evolve through the influence of social interactions (Bale, 2003; Fishwick & Vining, 1992; Kruger, 2006; Williams, 2008), family legacy (Davenport et al., 2010), use history (Brooks, Wallace, & Williams, 2006; Williams, 2008), place characteristics (Bale, 2003; Tuan, 1975; Williams, 2008),

sensory experiences (e.g., odours, textures) (Bale, 2003; Tuan, 1975), nostalgia (Bale, 2003) and place knowledge (Tuan, 1975). In contrast, others have suggested that places are becoming placeless or non-places; in essence they are losing their meanings as various sensory experiences are removed and generalized (Relph, 1976; Urry, 2008; Williams, 2008). However, Bale and Vertinsky (2004) deny the application of this argument to sport places, indicating that the wide range of rules, sporting contexts, and associated meanings articulated by athletes and spectators ensure that they are not non-places but are places with meaning.

Research on place should include consideration of how people create and establish meaning in specific spaces; this includes recognizing that people may hold positive, negative, or neutral place meanings. For example, a rock climber may apply negative meanings to a climbing place where he/she was injured. This place may be important to the climber because he/she would like to return to complete the climb in the future or alternatively, may wish to avoid it. Place is particularly relevant to climbers because of the meaning formed through interactions between other climbers, the climbing area, and the routes they climb, in both artificial and natural settings.

Furthermore, an understanding of place meaning is important because "researchers and practitioners are drawing attention to the role of place and how it influences recreation choices" (Kruger, 2006, p. 385). If people create place meanings by using a specific space these meanings can in turn influence others who use the space. As a result, place meanings have resource management implications and may be influenced by management decisions which impact the

formulation of place related bonds. Therefore, insight into place meanings for climbers is important for understanding their place attachment.

Place Attachment

Recreation and sport activities lead to a range of interactions between people, people and the site of their sport activities, and people and site based objects—all of which establish place meaning. Place meanings contribute to an individual's relationship with specific places, which is often referred to as place attachment or the bond or link that a person has with a specific place (Hidalgo & Hernandez, 2001; Low & Altman, 1992). As Low and Altman (1992) explain, "the word 'attachment' emphasizes affect; the word 'place' focuses on the environmental settings to which people are emotionally and culturally attached" (p. 5). Hidalgo and Hernandez (2001) summarize place attachment as "a positive affective bond between an individual and a specific place, the main characteristic of which is the tendency of the individual to maintain closeness to such a place" (p. 274). However, other researchers have indicated that place attachment is not always established through a positive experience which will become an affective bond; it may also be neutral or negative (Manzo, 2003; Relph, 1976). Manzo (2003) explains that, "It can be argued, in fact, that places of refuge become meaningful precisely because there have been experiences of pain and loss that play a role in the experience of refuge" (p. 51). Research has shown that negative events (Relph, 1976) and the experiencing of negative emotions (Manzo, 2005) can result in place attachment. For example, while a mountain setting might be viewed as a "hostile environment," its multitude of uses and resources influence

the meanings for people who interact with that environment (Donnelly, 2004, p. 132), and these uses can then provide the foundation for an attachment to mountain places. Place meanings are, therefore, an important aspect of place attachment.

Place attachment features.

Attachment to special places occurs through interactions with tangible and intangible features associated with the site. Low and Altman (1992) explain that "place attachment involves interplay of affect and emotions, knowledge and beliefs, and behaviors and actions in reference to a place" (p. 5). Furthermore, the features of special places that encourage the development of place attachment often include "physical, geographical, architectural, historical, religious, social and psychological connotations" (p. 207) which are "located at several levels of a spatial scale" (Knez, 2005, p. 208). Smaldone, Harris, Sanyal, and Lind (2005b) argue that an individual's proximity to the specific place is important to the formation of place attachments and Eisenhauer, Krannich and Blahna (2000) suggest that attachment is a dynamic process as experience is gained and "various cultural, demographic, and economic changes" (p. 439) occur. In other words "the way a person views and responds to a place is dependent not only on the actual place itself, but also on the individual's ongoing and evolving personal and social relationships with that place" (Smaldone et al., 2005b, p. 91). Therefore, place attachment involves the interaction of multiple components: attachments (affect, cognition, and practice), places (variety of scales, specificity, and

tangibility), actors, social relationships (individuals, groups, and cultures), and temporal aspects (linear and cyclical) (Low & Altman, 1992).

The temporal aspect of place attachment has gained the attention of numerous researchers. Relatedly, frequency of use is important to the formulation of place attachment because people experience a place through activities (Moore & Graefe, 1994; Moore & Scott, 2003). Furthermore, the strength of attachment to a specific place is dynamic and constantly evolving and adapting in response to changing influences (Smaldone et al., 2005a). For example, Kyle and colleagues (2004c) found that as people increased their level of activity and experience on the Appalachian Trail, their attachment to the Trail also increased. Similarly, Smaldone and colleagues (2005b) found that place attachment occurred when people had longer and more frequent visits to Grand Teton National Park.

Importance of place attachment.

Continued interactions with place over time can lead to attachment. Once people have an attachment to a place, they are more likely to have a vested interest in that place's management and use issues (Kaltenborn & Williams, 2002; Smaldone et al., 2005b). Understanding place attachment helps resource managers to better understand visitor behaviour as part their planning/management processes (Kyle et al., 2004c). For example, managers should be aware that a positive attachment to place is associated with pro-environmental behaviours at that specific place (e.g., Halpenny, 2010). Place attachment also provides attached individuals with personal benefits. For example, individuals who form a positive bond with the specific place typically

experience feelings of safety and comfort in relation to that place. This extends to findings that indicate that activities in favourite places provide people with restorative experiences (Korpela & Hartig, 1996).

Place attachment dimensions.

Place attachment has been researched within multiple disciplines but the focus of this dissertation is on literature from outdoor recreation and environmental psychology. Researchers in this realm have identified that people express their experience and interaction with place through various dimensions of place attachment (Figure 2.2). Kyle et al. (2004c) and Smaldone et al. (2005b) indicate that a two dimension approach to place attachment is valid for place attachment research and these dimensions include: place dependence (functional) and place identity (cognitive) (Kyle et al., 2004c; Moore & Scott, 2003; Williams & Vaske, 2003; Williams et al., 1992). Other dimensions of place attachment have included but are not limited to: place affect (affective) (Halpenny, 2010; Low & Altman, 1992), place familiarity (Hammitt, Backlund, & Bixler, 2004, 2006), belongingness and rootedness (Hammitt, et al., 2004), and social bonding (Kyle, Graefe, & Manning, 2005).

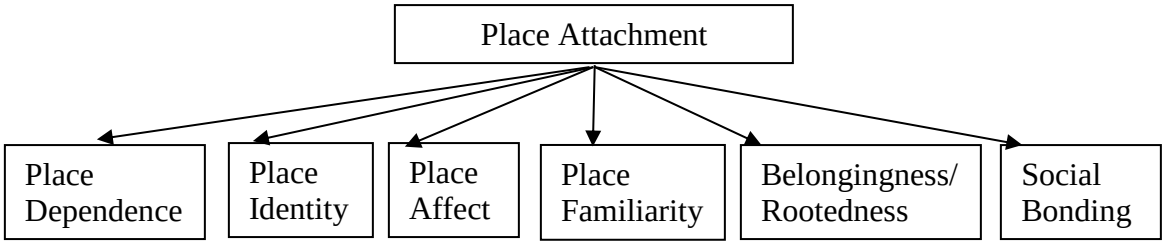


Figure 2.2. Previously Identified Place Attachment Dimensions.

Place dependence.

Place dependence "refers to the value that recreationists ascribe to settings because of the settings' specific attributes that facilitate leisure experiences" (Kyle et al., 2004c, p. 67) and these dependencies can occur in many different settings for a variety of reasons (Shumaker & Taylor, 1983). Place dependence can also include personal place meanings that rely on symbolic functions, for example "being who I want to be" (Davenport et al., 2010, p. 64). Typically, an individual reviews the specific features of a setting and evaluates whether the features will meet the requirements of the desired experience. If the features do not provide the desired experience, the individual will look for an alternative site. For example, Williams and colleagues (1992) found that a lower level of place attachment indicated that people were more likely to substitute one place for another, suggesting a lower level of place dependence. Place dependence is focused on the features of the place relative to the functional demands of the activity. Within sport, rules often define the boundaries (i.e., functional elements) along with other characteristics of the playing surface. The type and level of dependence that recreationists have for a place can influence setting preferences, behaviours, and how the place or user is identified (Kyle et al., 2004b; Kyle et al., 2004c).

Place identity.

Proshansky, Fabian, and Kaminoff (1983) explain that place identity "is a complex cognitive structure which is characterized by a host of attitudes, values, thoughts, beliefs, meanings, and behavior tendencies that go well beyond just

emotional attachments and belonging to particular places" (p. 62). Proshansky and colleagues explain that place identity is connected to self-identity where the individual relates to the place, themselves, others, and objects within the place simultaneously. Place influences the concept of one's self because "identity . . . defines an internal, subjective concept of oneself as an individual" (Knez, 2005, p. 208). Furthermore, the elements of place identity are influenced by positive and negative experiences, as well as by other people, all of which results in an on-going process of re-forming and re-stabilizing place identity. Kyle and colleagues (2004c) state that as an individual's skill level in an activity or sport increases so will his/her association with place identity. Instead of simply being a location for an experience to occur, place becomes an important component of identity (Twigger-Ross & Uzzell, 1996).

Place identity is not 'ready-made'; it is established through the individual's actions, which use place as a marker of self-identity within a social setting (Sarbin, 1983). Sarbin suggests that people are able to read the landscape and therefore use that interpretation to understand place identity and address their own self-identity. Low and Altman (1992) explain that it is the conceptualization of place that allows the self-definitional process to occur. Based on earlier work in the field, Knez (2005) discusses four processes related to the development of place identity: 1) place-related distinctiveness (how is the self-different from others?); 2) place-referent continuity (place reference to the past self) and place-congruent continuity (place as who the self is now); 3) place-related self-esteem (the self as part of the place); and 4) place-related self-efficacy (the place provides

the needs of the self). These processes illuminate the importance of the social element within place attachment and place identity.

Place identity is not limited to an individual's identity. Many groups and subcultures have also shown that they socially construct places and collective identities (Dixon & Durrheim, 2000), which foster group distinction (Kyle et al., 2004c; Low & Altman, 1992). Similarly,

> social worlds research has demonstrated that for many recreationists specific leisure settings are sought by different social groups. Consequently, recreationists may come to associate specific leisure experiences with these social groups and settings. (Kyle et al., 2004b, p. 136)

This social context illustrates how groups of people can be attached to places that provide the desired elements for a collective identity. People are connected to the place through its social elements and physical features (Low & Altman, 1992), and in understanding "where" they are they gain insight into "who" they are.

Place affect.

Place affect is "the emotions and feelings of an individual towards a particular place" (Halpenny, 2010, p. 410). The positive, negative or ambivalent emotions and feelings people express towards places demonstrate their relationship to specific places (Giuliani, 2003; Manzo, 2003, 2005). The emotion influenced by a place often mitigates an individual or group's desire to remain associated with and within close proximity to that place (Scannell & Gifford, 2010).

Place familiarity.

Place familiarity is often attributed to deep emersion within the specific place and highlights the temporal aspect of place attachment. Hammitt, Kyle, and Oh (2009) define place familiarity as "pleasant memories, attribute and cognitive meanings, and environmental images that result from acquaintances and remembrances associated with recreation places" (p. 61). Furthermore, Hammitt and colleagues (2006) suggest that of the place bonding/attachment dimensions, familiarity demonstrates the most site knowledge.

Belongingness and rootedness.

Just as place familiarity is associated with knowledge and a connection to a specific place, so too are belongingness and rootedness. Place belongingness is a person's emotional perception that he/she is connected to a specific place (Hammitt et al., 2009; Proshansky et al., 1983). Proshansky and colleagues (1983) explain that belongingness is associated with positive cognitions of place settings which are stronger than any negative perceptions. Belongingness is associated with and affected by social interactions, inclusion within groups in the space, and perceptions of integration and ownership within a specific place (Hammitt et al., 2009; Proshansky et al., 1983). Hammitt and colleagues (2006) comment further that:

> although different groups of people may share landscape preferences, one group may have a stronger level of affective bonding to that place, transforming preferences to appreciation. Not only may visitors appreciate the place, but also they may feel as though the place belongs in their

> personal social or physical environment or conversely that they belong in that place. (p. 22)

Previous climbing research has shown that climbers can be possessive (e.g., de Léséleuc et al., 2002) and secretive about their climbing locations (Halbert, 2010). Such behaviours reflect belongingness with place or rootedness where rootedness describes an individual's connection to a specific place which typically occurs through ancestral linkages, birthrights and settlement (Hay, 1998). Hay (1998) concludes that rootedness defines a geographic connection people have within sense of place. From an outdoor recreation perspective, rooted recreationists would be less likely to search for a multitude of appropriate sites for their activity (Hammitt, Backlund, & Bixler, 2004). McAndrew's (1998) scale of rootedness demonstrates that "high satisfaction with the current state of one's home and family . . . would seem to represent the positive . . . ends of the rootedness dimension" (p. 413). In terms of outdoor recreation, Hammitt and colleagues (2004) found that anglers were potentially influenced by the plethora of available resources and therefore were not rooted to specific places. Of further interest is the way that social bonds are influential within belongingness (Proshansky et al., 1983) and a rooted sense of place (Hay, 1998).

Social bonding.

Kyle and colleagues (2005) state that places are the host for social encounters and therefore become repositories of meanings associated with those interactions. For example, Hidalgo and Hernandez (2001) found that social attachments were stronger than attachments to physical places (i.e., house,

neighbourhood, and city). Similarly, findings from Kyle and Chick (2007) suggest that people's "perceptions of place and associated meanings" (p. 215) are based on their experiences and the people they interact with more than they are based on the physical features of the place. Kyle and colleagues (2005) argue that social bonding should be included in future "conceptualizations of place attachment" (p. 170).

Place attachment framework.

Place dependence, place identity, place affect, place familiarity, belongingness and rootedness, and social bonding have been used previously in various place attachment research as dimensions and frameworks. In a restructuring of these dimensions, Scannell and Gifford (2010, p. 1) provide "a three-dimensional, person-process-place organizing framework" of place attachment. Through the person dimension, the authors acknowledge the social processes that influence place attachment, namely individual and group or cultural interactions. The process dimension captures the above-mentioned dimensions to include affect, cognition, and behaviour. Finally, the third dimension, place, encompasses the physical and social defining characteristics of the place. This framework can provide an alternative theoretical base upon which a study of place attachment can be conducted where the multidimensional properties of place attachment are recognizable and deliberated.

Place and place attachment summary.

Meanings are applied to spaces through interaction and use thereby creating places. These place meanings are individual and collective and have

implications for resource development and management. Therefore, it is important to understand the meanings people attach to places because they articulate how people connect with specific places. Place attachment is formed as a response to interactions with/in specific places and the resultant connection to these places has been shown to influence people's behaviours and beliefs. Therefore, current research on place should consider how people create and establish certain meanings with specific places. This includes investigating and considering whether people have positive, negative, or neutral relationships with a place. It should also be recognized that people may be attached to more than one place for different reasons. Alternative place attachment dimensions are also important to consider when investigating individuals who travel in order to climb different sites and visit different places.

Given the above discussion about place and place attachment, the intense interaction between the climber and the setting establishes rock climbing as an intriguing activity through which to investigate place and place attachment. Specifically, questions arise as to what place meanings climbers express in terms of their climbing experiences in various climbing sites? And what insights do the climbers' narratives provide in terms of their relationships (e.g., place attachment) with those climbing sites? The next section presents an overview of rock climbing and its connection to the concept of place.

The Sport of Rock Climbing

Mountain climbing is associated with place through both popular and scholarly literature. The titles of mountaineering books and the stories within

highlight the importance of the climber and place relationship. For example, popular literature such as *View from the summit: The remarkable memoir by the first person to conquer Everest* (Hillary, 1999) and *Himalayan Quest: Ed Viesturs on the 8,000-Meter Giants* (Viesturs & Potterfield, 2003) emphasize this bond. Similarly, the academic literature has also highlighted the affective bond between the mountaineer and the mountain along with a connection through place identity (Blake, 2002; McCarthy, 2002).

Although the activity of rock climbing differs from mountain climbing based on its goal of completing a climbing route versus reaching a mountain's peak (Shaw & Jakus, 1996; Steele, 2006), rock and mountain climbing use similar skills and have traditionally occurred in similar spaces. In fact, rock climbing emerged as a variation of mountaineering when mountaineers were trying to climb cliffs on mountains and establish new first ascents (Feher, Meyers, & Skelly, 1998; Mellor, 1997; Nettlefold & Stratford, 1999). As rock climbing evolved, it developed its own norms, values, meanings, and beliefs that distinguished it from mountaineering. Despite its evolution, rock climbing is characterized by a similar bond between climber and place. For example, Heywood (2006) argues that "the core experience of climbing is to do with a real relationship with the material world and gravity" (p. 457). In summary, rock climbing focuses on the route and on the climb, rather than on reaching the summit of a mountain. While rock climbing routes are often shorter thereby allowing the climber to complete multiple climbs in one day or trip, it has been

assumed that rock climbers share a bond with place similar to that held by mountain climbers.

To the general public, a climber is a climber, however, climbers typically classify themselves and others in a more detailed manner (Kiewa, 2002). Furthermore, Levey (2010) has argued that different sensations and experiences are obtained through the various climbing types. The distinction between climbing types is dictated in part by motivations and sites (e.g., the kind of rock and routes) to which climbers are attracted (Graydon & Hanson, 1997). Rock climbing can be separated into four distinct types based on different behaviours and techniques: traditional climbing, sport climbing, aid climbing, and bouldering (Steele, 2006). Furthermore, some climbers choose to make rock climbing a lifestyle and dedicate their life and resources (e.g., finances) to traveling and climbing (Rickly-Boyd, 2012). These "dirtbag" climbers are often considered a subculture of rock climbing. Although climbers typically specialize in one specific type of climbing, many climbers actually partake in multiple types of climbing (Levey, 2010; Schöffl, 2013).

The motivations of rock climbers have been linked to characteristics of climbing sites. Considerations include: the natural environment surrounding the climbing area and route, the difficulty of the climb (e.g., its length and challenges), ease of accessibility to the climbing area, distance from the city/townscape including the pursuit of solitude, and the physical movements required of the climbing routes (Attarian, 2003; Graydon & Hanson, 1997; Rossiter, 2007; Threndyle, 1999). Robinson (2008) links motivations to climbers'

perceptions of risk, masculinity, and pleasure and found that climbing abilities, behaviours, and perceptions changed over the climber's lifetime.

The "route" or "problem" is an important element of the climbing site. Routes can act as an attraction which draws climbers to a specific site and encourages them to return based on their desire to succeed at uncompleted climbs or to repeat past accomplishments. Karlsen (2010) explains that routes can have an aesthetic quality that climbers tend to prefer. If the quality of the route is perceived favourably by the broader climbing community, the route often becomes a "classic climb" and has cultural importance. Hanley, Write, and Koop (2002) found that important site requirements for Scottish climbers were characteristics of the place: the approach, length of the climb, scenery, and the difficulty or star rating in the guidebook. Similar results were found by Attarian (2005) in a study of climbers at the Grandfather Mountain Corridor/Blue Ridge Parkway in North Carolina. Woratschek, Hannich, and Ritchie's (2007) study of rock climbing tourists in Europe identified a few characteristics that seem representative of special places including infrastructure, uniqueness, remoteness, and the condition of the climbs and site. For some climbers the attraction of climbing is being able to climb in isolated or extreme settings (Robinson, 2008).

Outdoor climbers interact with the natural environment and have been shown to be possessive (de Léséleuc, 2004; de Léséleuc, Gleyse, & Marcellini, 2002; Dustin, Schneider, McAvoy & Frakt, 2002), engage in a social community (Cailly, 2006; de Léséleuc, 2004), and concerned about the health and welfare of their climbing areas (de Léséleuc et. al., 2002; Dustin et. al., 2002; Grijalva &

Berrens, 2003). This has resulted in an interesting dynamic of sharing the climbing site while limiting site access and/or knowledge. An example of this dynamic occurs when route setters contribute their personal time and finances to create new routes (Halbert, 2010). Their motivation for establishing new routes and climbing areas is often to claim a first accent but this accomplishment also serves the broader climbing community (Halbert, 2010). Furthermore, there are informal ethics within the climbing community which grant the first accent to the individual who cleaned[2] the rock and set the route. Sometimes new routes or entire climbing areas are treated as confidential by a small group of climbers until development is complete. However, the ultimate purpose of this development is often to share the route or climbing area with other climbers (Halbert, 2010). Conversely, the indoor climbing gym is typically a private business with route setters who are their employees and are paid to create routes. While a rock cliff is "cleaned" for climbing, it is still considered more natural than an artificial wall or surface. An artificial wall or indoor climbing facility can be viewed as location where the activity and the site become commodified.

Elements of place attachment, place dependence and place identity, are evident in the motivations and site features just described. Examples of factors related to place dependence include: accessibility to the climbing area (e.g., distance from home), the approach length (i.e., distance from parking lot/trailhead to base of the climb), the length of the routes, and type of climbing available at the climbing area. Based on the literature one might suggest that place identity

[2] Cleaning a new route often involves removing dirt and loose rocks, purging moss, lichen or other vegetation from the cliff face where the route will progress.

factors could include: the environment surrounding the climbing area and routes, difficulty of the climbs, and the climbing style/movements and associated accomplishments. For example, Tejada-Flores (1990) explains the importance of place and identity by commenting:

> Climbing, most of us agree, is a creative act. But what climbers create are not just routes, not just aesthetics statements, dotted lines up cliffs, articles in Climbing or Mountain, or footnotes in a guidebook. Climbers are busy creating their own personas and personalities, their own lives, as they climb.

While it is evident that place is an important component of rock climbing, it has not been systematically researched within the outdoor or indoor settings.

Indoor spaces for outdoor sports.

Sport spaces are changing and opportunities for sports are increasingly being expanded from their original "natural" settings (Kural, 2010) into built facilities which mimic the original (Rabinowitz, Frauman, & Williams, 2010; Tivers, 1997). For example, skateboard parks that resemble city streetscapes are being constructed in urban parks so that skateboarders can practice their sport away from traffic hazards found on the actual streets (Kellett & Russell, 2009). Opportunities for other outdoor recreational activities such as downhill skiing (Tivers, 1997), golf (Forester & Beggs, 2001), white water kayaking (Barnes, Forrester, & Leone, 2013; Rabinowitz et al., 2010), skydiving and surfing (van Bottenburg & Salmone, 2010) are now available to participants within built (fully enclosed indoor) or dramatically modified outdoor facilities. This growing trend

of locating outdoor lifestyle sports is particularly evident in rock climbing with the establishment of indoor purpose-built facilities (van Bottenburg & Salome, 2010).

Indoor and artificial climbing facilities.

When indoor climbing facilities first emerged they tended to be seen as a space for practicing specific climbing techniques and an alternative site during unfavourable climbing weather (e.g., rain and snow) and seasonality (Eden & Barratt, 2010; Mittelstaedt, 1997). Built climbing facilities were originally developed in fitness centres and repurposed warehouses (Attarian, 1999) but purpose-built facilities are increasing (Attarian, 1999; Klauser, Bodner, Frasuscher, Gabl, Nedden, 1999). Climbing walls were and are currently being built in homes, stairways, weight gyms, schools, universities, shopping malls, outdoor equipment stores, and health clubs within communities of all sizes (Attarian, 1999; Klauser et al., 1999; Mellor, 1997; Mittelstaedt, 1997). Artificial climbing walls are also being constructed as permanent structures or movable walls for use outdoors. However, these outdoor artificial climbing walls are beyond the scope of this dissertation, as it focuses on indoor artificial climbing sites/facilities.

Increasingly, people have been introduced to rock climbing through instruction at indoor climbing facilities (Attarian, 1999) and therefore many climbers have used these indoor facilities as a means to gain skills that can be applied to climbing at natural sites (Morgan, 1998). The evolution of the "climbing wall" created new spaces to practice, train, recreate, and compete that

replicated the routes found at natural climbing places (Attarian, 1999; Hyder, 1999; Mellor, 1997; Mittelstaedt, 1997; Threndyle, 1999; Steffen & Stiel, 1995). For example, climbing hold manufacturer Nicros (n.d) created a set of holds which the company explained "forever immortalizes the route 'Lotta Balls' in Red Rocks, Nevada, and its unique features." Therefore climbers can attempt the route without experiencing adverse site conditions (e.g., inclement weather).

Intriguingly, some climbers have demonstrated a preference for climbing in indoor facilities (Robinson, 2008). The influence of built sport facilities is also noted by Kellett and Russell (2009) who explain that built skateboard facilities were a major factor in the evolution of the sport of skateboarding. Similarly, it has been speculated that indoor climbing facilities have been identified as influencing the development of the sport of climbing and climbers' behaviors and perceptions (Eden & Barratt, 2010; Roth, 2009). The reduction of risk and climbers' perceptions of risk is one of the ways in which indoor climbing has influenced climbing in general (Robinson, 2008).

It is interesting to study people who regularly use climbing in the context of place because this population has a vested interest in the artificial environment and how it changes. In a built setting, the building and walls remain the same, but the climbing holds and volumes[3] are moveable allowing for changing routes and challenges. Therefore, while the building and major structures for indoor climbing places may remain constant, the holds, routes and problems are dynamic.

[3] A volume is a removable feature used to add dimension to an artificial climbing wall.

Sport of rock climbing summary.

Climbing areas that are indoors and outdoors can be important places for climbers. Outdoor climbing sites were once the locations where individuals learned to climb, where climbers could socialize with one another, and where they could improve their climbing skills in natural settings. With the increase in the number of rock climbers, outdoor sites are experiencing more environmental and social impacts which are leading to the closure of some climbing sites. Furthermore, various evolutions in rock climbing have influenced climbers' accomplishments, motivations, social interactions, and behaviours. For example climbing gyms provide a social environment where routes/problems change regularly, accessibility is relatively easy and there are no seasonality effects.

Published research has demonstrated that climbers interact with their climbing sites and desire specific features or elements (e.g., approach length, route difficulty, and style of climb) but it has not examined in depth the meaning of place to climbers. Therefore, theoretical and practical insight into how climbers interact with their climbing environment through place meaning and place attachment will contribute to the understanding of how places are infused with meaning and how place attachments are influenced by activities and experiences in outdoor and indoor settings.

Gaps in Place and Place Attachment Research

This literature review offers a conceptualization of place and place attachment research. However, when the concepts of place and place attachment are considered simultaneously within the activity of rock climbing, certain gaps in

the literature become evident. One such gap is reflected in the fundamental research question: "What transforms a climbing space into a climbing place?" The rock climbing context is interesting because the theoretical literature about place and rock climbing leans toward nature and outdoor recreation in keeping with the traditional view of climbing as an outdoor activity. The place and rock climbing literature has not fully explored the evolution of rock climbing within indoor or modified settings. Two significant gaps are evident in the place literature: (1) characteristics of climbing spaces that contribute to outdoor place meaning; and (2) characteristics of place meaning for built climbing environments. The following section will outline these gaps in the research with a focus on rock climbing.

Characteristics of climbing spaces that contribute to outdoor place meaning.

Place meaning is an explanation as to why a place is important (Smale, 2006). It also influences the choices made by recreationists and therefore has management implications (Kruger, 2006). Places become meaningful through use (Brooks et al., 2006; Fishwick & Vining, 1992; Williams, 2008) and relatedly, the characteristics of a place contribute to its distinction and uniqueness (Tuan, 1975). Research on rock climbing has focused on climber impacts, motivations, economic valuations and impacts, and physiology, and yet it provides an elementary understanding of outdoor rock climbing and place meanings. For example, research has not documented the place meaning of important climbing sites and routes within the activity. That said previous research does provide a

platform of rock climbing knowledge from which the current research can be conducted to provide insight into the place meanings of outdoor rock climbers. Therefore, the first gap identified considers previous climbing literature and asks "What meanings are ascribed to outdoor climbing sites?" (Figure 2.3).

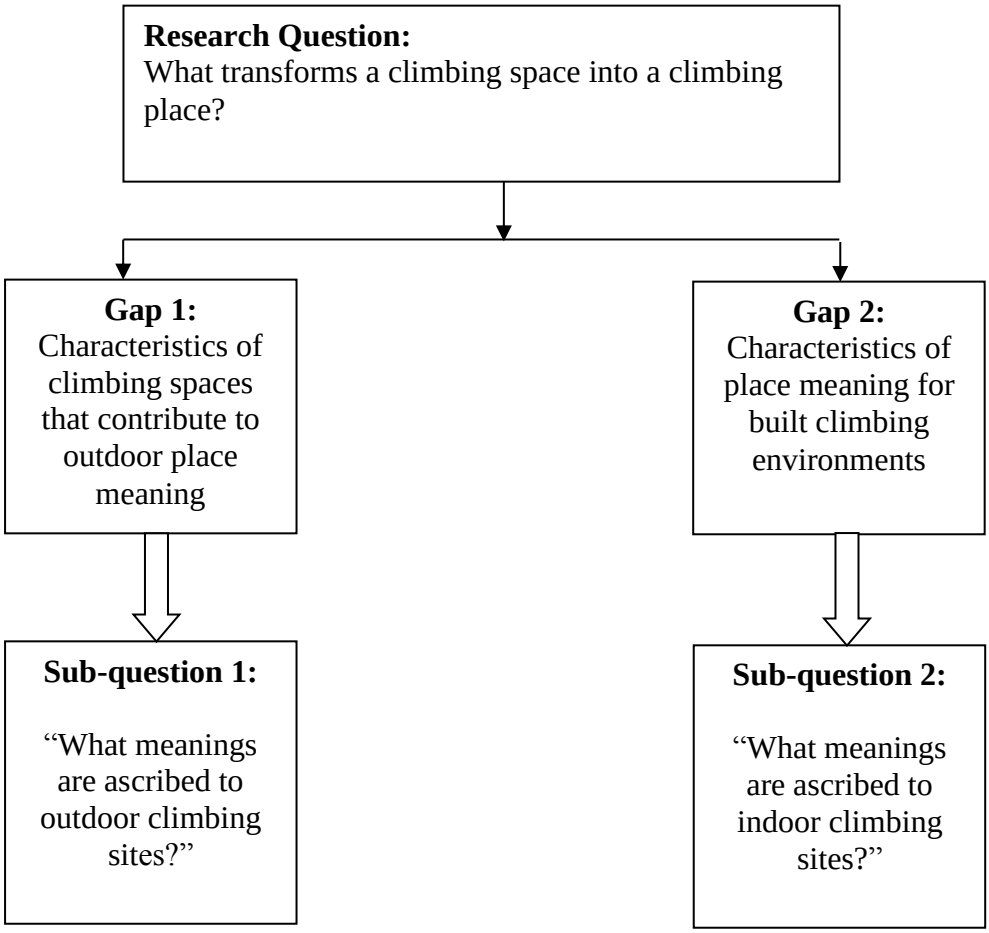


Figure 2.3. Research Question with place attachment gaps and sub-questions.

Characteristics of place meaning for built climbing environments.

The built environment is not unique to place research as geographers and others have long explored the importance of the home and community for place attachment and sense of place. However, place meaning has not been thoroughly

researched in built recreation and sport settings. Kyle and Chick (2007) explain that "perceptions of place and associated meanings" are based on experience and people more so than on the physical features. In contrast, Stedman (2003) and Warzecha and Lime (2001), all argue that physical features of a place are important to the formation of place attachment. Hidalgo and Hernadnez (2001) segment the built environment (e.g., home, neighborhood, and city) in order to investigate levels of place attachment at various spatial scales. Although their study did not focus specifically on recreation, leisure, or sport, they conclude that place attachment varies with scale. Twigger-Ross and Uzzell (1996) also found that place identity is formed through interaction with the "home" environment.

Despite the evident importance of place attachment in the home or local area, research on place and place attachment associated with recreation, leisure, and sport has been concentrated in outdoor environments. In contrast to the solid platform of research on recreation, leisure, and sport in the natural environment, there has been little research on place attachment to the built (recreation and sport) environment. The importance of the built environment within place research and a recreation, leisure, or sport context has only been noted in a few studies. For example, Alexandris (2006) found that skiers are attached to place and it is the marketing of ski resorts which affects skiers' place identity and dependence. Similarly, Bale (1988, 2003) argues that through sport, people are able to create and define important or special places and that consequently sport is becoming confined to specific spaces. Unfortunately, Bale did not discuss place attachment in depth.

Academic research on indoor and artificial climbing walls has focused on climber physiology (de Geus, O'Driscoll, & Meeusen, 2006), injuries (Schöffl & Kuepper, 2006; Wright, Royle, & Marshall, 2001), and a historical review of indoor climbing walls (Attarian, 1991). Hyder (1999) and Steffen and Stiehl (1995) also explained the benefits and issues associated with operating indoor climbing walls in schools. Although these articles address the sport of climbing within the built environment, they do not address the importance of the place or place attachment.

Whereas researchers have commented on the benefits of indoor and artificial climbing walls, they have not yet considered whether common assumptions about place and place attachment in outdoor sites hold in the case of indoor/ artificial climbing. This is worth noting because Borrie and Harding (2002) suggest that differences exist between individuals who learned to rock climb indoors versus those who learned outdoors. Indoor learners had different perceptions about how to experience the natural climbing environment (i.e., the bolting of new routes and climbing near historic sites) than did outdoor learners (Borrie & Harding, 2002). Therefore, it is relevant to explore how place meanings and place attachment form for climbers in different settings (i.e., outdoor and indoor).

This research will investigate place meaning and place attachment within the context of indoor climbing. It seeks to determine which place meanings are at the forefront of a climber's description of indoor climbing. The place gap identified here requires climbers' insight into the features and characteristics of an

indoor climbing site in order to understand the ever evolving definition of meaningful places. Specifically, the gap leads to sub-question two which asks, "What meanings are ascribed to indoor climbing sites?"

Gap one and two and sub-questions one and two ultimately respond to Kyle and Chick's (2007) comment that, "What remains poorly understood are the conditions (e.g. setting context, specific populations) in which the physical environment influences people's attachment to place" (p. 223). The final gap addressed by this research builds from understandings of place meanings to investigate the place attachment of climbers, thereby contributing to a more comprehensive conceptualization of climbing places.

Place Attachment and Rock Climbing

Many articles have highlighted the importance of experiences, different settings, and types of activities on the formation of place attachment (Kyle, Graefe, Manning, & Bacon, 2003). For example, Bricker and Kerstetter's (2000) study of white-water recreationists highlights that place attachment varies between experience levels and by the types of activities. Similarly, Moore and Scott's (2003) study of trail users reveals that frequency of use positively affects trail and park attachment and that trail attachment varies between trails and activities. Expanding on the importance of experience, Williams et al. (1992) note that a lower place attachment encourages the practice of place substitution. In view of this finding, the question emerges as to whether climbers who climb in multiple places are attached to any of the specific places they use? Rock climbers tend to be concerned about place characteristics that impact their experiences

(Monz, Smith, & Knickerbocker, 2006; Ramthun & Blake, 2002). Despite these concerns, a gap remains in the literature about the nature of place attachment related to climbers in general and those who climb indoors in particular. The gaps in the literature include insight into the way climbers interact with their climbing places and questions of if, how, why, and when climbers of all types form a bond to specific places? This dissertation contributes to the literature by providing insight on the place attachment of climbers. It provides further clarification on the characteristics and experiences that are associated with the various dimensions of place attachment that transcend the affective, cognitive, emotional, and physical interactions at and within special places. Furthermore, Manzo (2003) comments that:

> What is sorely lacking in this perspective is an appreciation for the role that individuals play as active participants in, and shapers of, their environments. This is where the literature on place attachment and place identity can make a critical contribution. (p.56)

Reviewing the six place attachment dimensions discussed in the literature review in the context of the climbing narratives can provide insight into how rock climbers are constructing meanings and attachments.

Literature Review Summary

While research on place has explored some aspects of recreation and sport, other aspects have yet to be investigated in detail. Previous research has indicated that spaces become places through peoples' interactions within those spaces.

Such interactions can lead to positive, negative, and neutral place meanings based on people's cognitive and emotional perspectives. The argument presented throughout this chapter is that the concept of place is important to consider in terms of the sport of rock climbing because a large component of climbing is focused on the interaction between climbers, the routes they climb, and the natural or artificial setting in which climbing occurs.

The place based research gaps identified within this chapter will be addressed by: 1) studying physical activity groups in terms of their conceptualizations of place meanings; and 2) investigating the place meanings and perceptions of the built recreation and sporting environment of what are typically perceived as outdoor sports. Figure 2.3 shows each documented gap in the place literature and its relationship to the corresponding sub-question. The identification of characteristics that lead to defining place meanings for outdoor and indoor climbers will add to the understanding of how people interact with their recreation and sport environments. The research will provide fundamental insight into place meaning and place attachment across the natural and built/indoor settings in the context of rock climbing.

Chapter Three: Methodology

Introduction

The methodologies of research constitute "the framework guiding why we use specific methods or procedures in our research" (Whaley & Krane, 2011). Chapter Three links the epistemology, ontology and method to the research. An interpretivist perspective helps researchers to understand the meanings, experiences and behaviours of individuals through the individual's point of view (Creswell, 2009; Schwandt, 2001; Tribe, 2004; Williams, 2000). Insight into rock climbers and their relationship to climbing places can therefore be gained through interpretive inquiry.

Positioning the Research

This inquiry contributes to advancing the understanding of place meaning and climbing in a holistic manner by examining the components in relation to the whole and vice versa (Ellis, 2006; Schwandt, 2001). The research project provides a detailed description or map (Markula & Silk, 2011) of climbing place meanings in relation to a group of rock climbers from Western Canada. Therefore, this research fits within those "projects that map the general features of a practice of physical culture" (Markula & Silk, 2011, p. 9). The purpose of this research is to examine the sort of place meanings climbers have for climbing sites and to reflect on other perspectives or theories which might contribute to comprehending place meanings. Using a qualitative methodology and being cognizant of climbing publications (e.g., magazines, guidebooks), previous

research, and my climbing background, this study will describe the place meanings for a group of rock climbers from Western Canada.

Ontology and Epistemology within Interpretivism

Ontology constitutes perspectives about "being, meaning and identity" (Hollinshead, 2004, p. 83) as well as aspects of reality, while "[e]pistemology determines what researchers accept as the truth or as real, which then guides how we attain that knowledge" (Whaley & Krane, 2011, p. 396). Creswell (2009) explains that "these worldviews are shaped by the discipline area of the student, the beliefs of advisers and faculty in a student's area, and past research experiences" (p. 6). Likewise Dupuis (1999) suggests that "qualitative leisure researchers working within an interpretivist paradigm should stop adhering to positivistic notions of science and adopt a way of social inquiry that is more in keeping with the ontological and epistemological worldviews that guide their work" (p. 45).

Within interpretivism the researcher realizes that people are part of the world surrounding them and through their interactions they create interpretations and meanings of the world and its components (Angen, 2000). Furthermore, "interpretivism is based on the life-world ontology which argues that all observation is theory- and value-laden and that investigation of the social world is not, and cannot be, the pursuit of detached objective truth" (Leitch, Hill, & Harrison, 2010, p. 69). Angen (2000) clarifies this by noting that:

> The world of our lived experience, the lifeworld, is the very ground from which all understanding grows; what we know is always negotiated within

> the culturally informed relationships and experiences, the talk and text, of our everyday lives. An interpretivist approach is attuned to the dialogical context of human understanding, arguing that we cannot step outside of our intersubjective involvement with the lifeworld and into some mythical, all-knowing, and neutral standpoint (p. 384).

Truth within interpretive research evolves from a socially constructed reality and realism is not deliberated "beyond how we experience it in our everyday lives" (Angen, 2000, p. 385).

Interpretive inquiry.

Interpretive research seeks to understand meanings created, communicated, interpreted, and modified by people (Gephart, 2004; Williams, 2000). Thus, an interpretive inquiry "can seek to understand what general concepts like "poverty" or "race" mean in their specific operation, to uncover the conscious and unconscious explanations people have for what they do or believe, or to capture and reproduce a particular time, culture, or place so that actions people take become intelligible" (Lin, 1998, p. 162). What this demonstrates is that an interpretive inquiry is a holistic approach which "can produce detailed examinations of causal mechanisms in the specific case, explaining how particular variables interact" (Lin, 1998, p. 163). In order to successfully interpret the data, the researcher must understand how the issue or question being researched fits within the entire person or event being researched (Ellis, 2006; J. Ellis, personal communication, November 17, 2007). A holistic understanding is developed by

studying the separate elements of the issue and considering how each element relates to the whole (Ellis, 1998; 2006). Lin (1998) explains:

> Interpretivist questions remind the researcher to look not only for the presence or absence of a relationship, but also the specific ways in which it is manifested and the context in which it occurs. Thus, the research is able to go beyond "what" has occurred to see "how" it has happened. The researcher does this by paying attention to the actors' stated reasons for their behavior, trying to figure out how behavior and belief match, and looking for ways in which those beliefs and behaviors are echoed in other specific practices. (p. 167)

Therefore, the context of the research is important (Angen, 2000). Dupuis (1999) acknowledges that the design of the research and the actual research process is not typically presented within published leisure research articles.

Interpretive inquiry process.

Through interpretive inquiry, the researcher attempts to gain a broad understanding of the problem or issue. To begin the research, a researcher may ask simple questions surrounding the whole problem/issue which focus on "Why is this happening?" or "How can I or anyone help?" or "How might this help?" (Ellis, 1998, p. 19). Interpretive inquiry requires the researcher to demonstrate humility, open-mindedness, and a caring attitude (Ellis, 1998). A metaphor within interpretive inquiry that aids the researcher's perceptions and actions when conducting research is the interpretive inquiry spiral (Appendix A).

Entry questions signify the beginning of the interpretive inquiry spiral, which can be thought of as a series of linked spirals. Each loop represents the researcher's attempt to improve upon the original understanding of the problem/issue. The forward arc represents the asking of a question, collecting of data, and interpretations. It was within the forward arc that I conducted interviews and reformed the interview questions and process by adding and adjusting probing questions. Furthermore, I began to create my interpretations of the interviewees' interpretations of their experiences and perceptions. The back arc represents the uncovering of unexpected findings in response to the inquiry. The back arcs' uncovering often does not provide the answer to the question but rather shapes and guides each subsequent loop through an increased understanding of the original problem/issue (Ellis, 1998). Probing questions evolved through the interpretation of the interview data. Reviewing the previous interviews helped focus and expand each subsequent interview. Typically, after the first loop, the research is refocused and the researcher redirects the interaction with the participants and research materials.

The forward and backward arcs represent one complete loop within the Interpretive Inquiry Spiral. The forward arc uses the "fore-structure" of the researcher to create preliminary understandings and interpretations of the accumulated data before the back arc begins (Ellis, 1998). The "fore-structure" is inclusive of the researcher's preconceptions, pre-understandings, and individual background (Ellis, 1998). This engagement is the interaction between the fore-structures of the researcher and participants' working to create knowledge and

understanding. Within the back arc, the researcher begins with an analysis of the findings, looking for gaps or interpretations that might have gone unnoticed (Ellis, 1998). Therefore, "in this process it is just as important to ask what is absent in the data as what is present" (Ellis, 1998, p. 27). Within the spiral, the researcher will move to another level of inquiry as the research progresses through data collection and continuous analysis.

The objective of interpretive inquiry is to gain informed knowledge from multiple perspectives. As Green metaphorically states "I want to see through as many eyes and from as many angles as possible" (in Casey, 1996, p. 237). Therefore, it is important that the qualitative researcher is reflexive. Reflexivity is the process of acknowledging the researcher's predispositions and how they might influence the data collection and analysis (Gibbs, 2007).

Method

Data were collected through semi-structured in-depth interviews with climbers living in Western Canada who were active indoor and/or outdoor rock climbers. Narratives and other responses from participants were analysed and coded line-by-line.

Participants.

Interviewees were people who participated in the sport of climbing primarily as active outdoor and/or indoor rock climbers. Participants who climb recreationally and/or competitively and who were 18 years or older were sought. Bowen (2008) suggests that "an 'appropriate' sample is composed of participants who best represent or have knowledge of the research topic" (p. 140) and

likewise, Williams (2000) explains that "if it is accepted that generalisation from interpretive data is a legitimate goal, then presumably the interpretivist needs a sample that will reflect the relevant characteristics of the wider group to which she wishes to generalise" (p. 216). Generalizations can be "moderate" and focus on the community and theoretical insights of the research (Williams, 2000). Key informants for this research, people who were active rock climbers within Western Canada, were located through a snowball sampling procedure (Patton, 2002). This procedure was initiated via contact with climbing organizations (e.g., the Alpine Club of Canada), climbing gyms, climbing competition participants, and personal contacts. Furthermore, posters were displayed at indoor climbing facilities and rock climbing focused retailers in Calgary and Edmonton, Alberta, (Appendix B). Study participants identified themselves as spending a substantial amount of their leisure time rock climbing. In total, 21 participants (Appendix C) were interviewed which was appropriate as qualitative research often includes sample sizes of 15 ± 10 participants (Kvale, 2007) and considers data saturation (Patton, 2002). To achieve data saturation, new participants were sought until no new data was being uncovered. Morse, Barret, Mayan, Olson and Spiers (2002) suggested "saturating data ensures replication in categories; replication verifies, and ensures comprehension and completeness" (p. 12). Interviews continued until a saturation of understanding was achieved from analysis of the climbers' responses (Patton, 2002).

Interviews.

Semi-structured interviews were used to allow participants to share their thoughts, experiences, and ideas through narratives or personal accounts. The length of the interviews varied between 45 minutes and one hour and 30 minutes. Prior to participating in the interview, participants were given a participant information letter (Appendix D). The participant information letter and oral consent procedure conducted within the interview outlined the research study and the known ethical considerations of the research. Ellis (2006) explains "One of the challenges in interviewing is to create conditions that enable the participant to recall significant experiences, analyze them, and reflect on their meaning" (p. 113). Semi-structured interviews permit the interviewer to investigate the content that emerges through the interview process (Barbour & Schostak, 2005). An interview guide was used to focus the discussion and to provide a framework for the interview (Patton, 2002) that directed the interview process with the purpose of collecting climbers' stories or narratives. Interview questions began with broad queries about climber background and climbing motivations. Questions then narrowed and focused on inquiries which collected specific narratives and experiences associated with various climbing sites (Appendix E). One component of the interview required interviewees to draw a picture or map of their favourite climbing place to encourage the participants to recall and reflect on previous climbing places and experiences. Visual media have been suggested as effective means of communicating experiences and perceptions of recreation sites during an interview or focus group (Manning & Freimund, 2004). Images created by the

interview participants were used to stimulate discussion and focus responses (Yuen, 2004). The images also highlighted features of each of the climbing sites that were important to the participants. While these images were not analysed as data, they assisted the interview process by helping the participants to reflect on their site experiences. These images can therefore minimize what Ellis (2006) identified as one challenge of interviewing.

Interview locations.

Interviews were conducted in Calgary and Edmonton, Alberta. Interview locations were determined at the convenience of the interviewee. Although the expense of travel was a budgetary constraint, it was important to interview individuals from across Western Canada so various interviewing options beyond face-to-face interviews were utilized. Three Skype internet interviews were used when face-to-face interviews were not possible or practical.

Transcribing.

All interviews were transcribed verbatim. I transcribed 12 of the 21 interviews and the remainder of the interviews were professionally transcribed. All 21 interviews were proofread while listening to the recorded interviews to ensure a high quality transcript was available for data analysis.

Analysis

The Interpretive Inquiry Spiral exemplifies the data analysis process within this type of qualitative research. Whenever possible, as soon as an interview was complete, transcribing and a preliminary data analysis were initiated (Patton, 2002; Schwandt, 2001). Interview transcripts resembled stories

or narratives provided by the interviewees and were analysed through a narrative analysis and line-by-line coding procedures.

Narrative analysis.

A typical narrative or story occurs in chronological order with metaphors, important/influential individuals, experiences, and objects. People use narrative to explain and understand previous experiences and behaviours and to share their understandings of those experiences and behaviours (Gibbs, 2007; Thorne, 2000). As Patton (2002) suggests "The central idea of narrative analysis is that stories and narratives offer especially translucent windows into cultural and social meanings" (p. 116). Patton (2002) explains that people's experiences could be compared when reviewing "connections between the psychological, sociological, cultural, political, and dramaturgic dimensions of human experience to reveal larger meanings" (p. 478). Polkinghorne (1995) indicates that narrative inquiries should be separated into two different groups, narrative-type and paradigmatic-type.

In the narrative-type, data is collected and the researcher creates a narrative or story by compiling the data to communicate all of the meanings of the data while in paradigmatic-type narrative inquiry, as used here, the researcher analyzes stories collected through various methods including interviews and documents. Stories are shared between the interviewee and interviewer in the language of the interviewee (Polkinghorne, 2002); "speech forms are not the experiences themselves, but a socially and culturally constructed device for creating shared understandings about them" (Thorne, 2000, p. 69). Polkinghorne

continues, "Stories express a kind of knowledge that uniquely describes human experience in which actions and happenings contribute positively and negatively to attaining goals and fulfilling purposes" (p. 8). Therefore, it is possible for the stories to reveal how people interact with climbing places and have an experience that results in place meanings and place attachment being positive, negative, or neutral. Specifically, the paradigmatic cognition has the "primary operation of . . . classifying a particular instance as belonging to a category or concept. The concept is defined by a set of common attributes that is shared by its members" (Polkinghorne, 1995, p. 9). For example, a coffee table and desk would be subordinate categories of a furniture classification and so "The paradigmatic analysis results in descriptions of themes that hold across the stories or in taxonomies of types of stories, characters, or settings" (p. 12).

The narratives provided by the interviewees were coded line-by-line and codes were organized in NVivo 8 software. While NVivo software can be used as an automated data analysis program, in this case NVivo 8 was only used as a data management tool. Coding involved subjecting all interview transcripts to inductive analysis in order to identify themes that provide insight into the experience.[4] After analyzing a majority of the interview transcripts, analysis became deductive, as patterns and similarities were recognized across the transcripts (Patton, 2002).[5] These patterns and categories highlighted the important dimensions of the study's data, based on the framework that was

[4] Inductive analysis occurs at the beginning of the analysis process as the researcher reviews the transcripts and patterns and categories emerge from the data set.
[5] Deductive analysis occurs once a majority of the transcribing has been completed because the researcher has started to notice patterns and categories within the data set.

developed as the transcripts were analyzed (Patton, 2002). Finally, "paradigmatic analysis provides a method to uncover the commonalities that exist across the stories that make up a study's database. It functions to generate general knowledge from a set of particular instances" (Polkinghorne, 1995, p. 14). Similarly, interpretive research should include considerations about what interviewees did and did not discuss (Ellis, 1998).

Evaluating an Interpretive Account

An interpretive account should not be evaluated according to ideals of authenticity and truth (Ellis, 1998). Instead, it should be evaluated to ensure that it has been ethical, and includes and acknowledges the influence of the fore-structures[6] of the researcher and the participants (Ellis, 1998). Packer and Addison (1989) suggest that an interpretive account be evaluated by "[its] coheren[ce]; examining its relationship to external evidence; seeking consensus among various groups; and assessing the account's relationship to future events" (p. 279-280). Interpretive accounts are based "upon notions of credibility and accuracy of description to establish validity" (Lin, 1998, p. 169). Ellis (1998) furthers the criteria of evaluation by suggesting that the interpretive inquiry should include advance thinking about the issue or problem. She provides six standards of criteria for the evaluation of an interpretive account,

> 1. Is it plausible, convincing? 2. Does it fit with other material we know? 3. Does it have the power to change practice? 4. Has the researcher's understanding been transformed? 5. Has a solution been uncovered? 6.

[6] The "fore-structure" is inclusive of the researcher's preconceptions, pre-understandings, and individual background (Ellis, 1998).

> Have new possibilities been opened up for the researcher, research participants, and the structure of the context? (p. 30-31)

Dupuis (1999) suggests that qualitative leisure researchers should write in the first person, which links the researcher to the research process, the data, and the interpretation of the data. Furthermore, writing in the first person also implies ownership of the interpretations: "Our conclusions should always provide new possibilities and remain open to alternate or more expansive interpretations" (Angen, 2000, p. 392). Finally, data "inconsistencies" and "contradictions" should be included within the interpretations and discussions about the data (Dupuis, 1999). Leitch and colleagues (2010) suggest including "outliers" and themes which "the participants do not mention" (p. 79).

Delimitations/Limitations/Ethics

Delimitations were concerned with the geographic and temporal boundaries of the study. Specific to this project, the geographic boundaries were limited to Western Canada. The interviews occurred within the temporal boundary from October, 2009 through to August, 2010.

A few limitations should be noted about the research methods. Within qualitative research, the interviewer is the instrument used for data collection and analysis. Although my experience as a qualitative researcher is progressing, it is a continual learning process to improve interviewing skills. Second, it is important to note that occurrences of researcher bias and error that are associated with the researcher's experience (Patton, 2002). Both of these limitations were accounted

for through the acknowledgement and use of the researcher's fore-structure (Ellis, 1998). Within interpretive research, each interview builds upon the previous ones which advance the development of the researcher and the research project. For example, in this process I was able to evolve as an interviewer and adjust the probing questions as required. A third interviewing limitation was associated with time constraints. To reduce this constraint, the interview guide was pre-tested on two rock climbing graduate students and communication with interview participants prior to the interview. Patton (2002) explains that communicating with the participants prior to the interview also addresses issues of recall error, anxiety, and reactivity. During the interviews participants shared their perceptions and interpretations about their experiences based on their personal accounts.

Ethics are an important component of qualitative research. Issues of confidentiality and anonymity may arise through the process (Guba & Lincoln, 1994). Therefore, as the researcher, I was open and forthcoming about the intent of the research and potential data dissemination. Ethics approval was obtained through the PER-ALES Research Ethics Board through the Faculty of Physical Education and Recreation prior to the initiation of the study. The ethical research guidelines provided by the Ethics Board and its successors were adhered to at all times.

Researcher Background

The topic for this doctoral dissertation was chosen, in part, because of my previous experience as a rock climber, in which I participated in both sport

climbing and bouldering. Personally, I have acquired favourite places to climb, both indoor and outdoor, and there are many locations where I would like to climb in the future. My interpretations of the opportunities for climbing were influenced by aspects of social interactions and constructions within the sport of climbing (e.g., books, magazines, friends, and movies). Place theory has been a large part of my work in recent publications and course assignments. For example, I was the lead co-author on a book chapter on outdoor adventure tourism and wellness entitled "Outdoor recreation, wellness" (Kulczycki & Luck, 2009) which references climbing and I have also worked with Dr. Halpenny on four place attachment projects in mountain national parks.

Researcher capabilities.

The researcher's role within qualitative research is to gain an understanding of peoples' behaviors, thinking, and actions (Ellis, 2006), while being the instrument used to collect and analyze the data (Angen, 2000; Patton, 2002). Therefore, the researcher must be honest, knowledgeable and open, and conduct relevant research (Angen, 2000). Guba and Lincoln (1994) suggest that the researcher is an "orchestrator and facilitator of the inquiry process" and can be thought of as a "passionate participant" (p. 114). Denzin and Lincoln (1994) add that "research is an interactive process shaped by . . . personal history, biography, genders, social class, race, and ethnicity, and those of the people in the setting" (p. 3). Therefore, it is relevant to provide a background on the abilities and preconceptions that characterize the researcher. I am a white male, age 31 at the start of the research project, born in Winnipeg, Manitoba, to a middle class

family. At one time I was an avid recreational rock climber partaking in bouldering, top-roping, and sport climbing. I continued climbing at the gym periodically throughout this project.

An important component of my role as a researcher is my ability to conduct qualitative research, including the formulation of the study and interview questions, data analysis and interpretation, and completion of the final dissertation. The various skills required to be a qualitative researcher are similar to those of the bricoleur. As a bricoleur, I used "tools" (e.g., interviews and literature) to collect, analyze, interpret, and create conclusions and explanations (the bricolage) that further my understanding. As a bricoleur, it was also my responsibility to be immersed in the relevant literature and theory that is applicable to this interpretive inquiry. Constant review of the literature and theory is an important aspect of the fore-structure as it guides and influences the researcher's interpretation (Packer & Addison, 1989). As the researcher, I constantly reassessed the data and research questions to arrive at consistent and informative solutions. Similarly, through prolonged interaction with the data I was able to progress through various stages of interpretation (Boostrom, 1994). Through constant reflection and re-evaluation (the back arc) I was able to progress from simple data collection to informed thinking, as an insider. An insider thinks subjectively, and is in a better position to understand the meanings of objects and occurrences. Boostrom (1994) identifies the final observer stage as the "reflective interpreter." In this stage the researcher responds to the "so what"

question and writes about the implications of the issue or describes the case from a holistic perspective.

Chapter Summary

This dissertation is an interpretive inquiry into the place meaning and place attachment of climbers in terms of the various sites they have climbed. Interpretive research focuses on the participants' interpretation of their experiences, perceptions, and their meanings (Cresswell, 2009). Semi-structured interviews with rock climbers from Western Canada were used to collect data about the place meanings and place attachments associated with their climbing sites and experiences. Transcripts, which included the climbers' narratives, were analyzed in terms of the place meaning expressed by the climbers. These data were coded line-by-line, and then thematically analyzed in order to understand the events and meanings associated with the experience of being a climber. Data analysis for sub-questions one and two allowed the guiding themes to emerge from the transcripts. Sensitizing concepts that focus on aspects of place, place attachment, and climbing provided a frame of reference while analyzing the transcripts and the data sets (Patton, 2002; Schwandt, 2000). The analysis includes open, honest and accurate depiction of my interpretation of the data as is consistent with an interpretive inquiry. While the discussion chapters highlight consistent patterns in the data, they also acknowledge the "inconsistencies" (Dupuis, 1999) and "outliers" (Leitch et al., 2010). This analysis is written up in two separate findings-based chapters of the doctoral dissertation. Each chapter

addresses a sub-question of the research. The final chapter outlines the significant differences between outdoor and indoor climbing place meanings and shares considerations about how additional theoretical perspectives, which are supplemental to the current place focus, can expand upon current understanding of rock climbing and place meanings. The purpose of completing a traditional thesis is to facilitate integration between the individual parts of the research. This research aims to contribute to the understanding of place, place attachment, and rock climbing through insight gained from the climbers' interpretations of their interactions with the places they climb. Specific consideration is given to the influence that the environment (indoor/artificial and outdoor/natural) has on place meanings and place attachments. The fundamental question guiding this research is "What transforms a climbing space into a climbing place?"

The following chapters present the results and discussion established through the data collection and analysis. Chapter Four centres on what the climbers focus on while establishing the place meanings towards their outdoor climbing sites and Chapter Five presents an analysis of the interviewees' narratives about indoor climbing experiences and facilities.

Chapter Four: Characterizations of Outdoor Climbing Places

Introduction

This chapter presents an integration of the research findings and interpretations about place meanings. Specifically, this chapter responds to the first research sub-question "What meanings are ascribed to outdoor climbing sites?" It demonstrates that climbing sites are comprised of numerous meanings which the interviewees understand, negotiate, and create while undertaking the act of climbing.

Results and Discussion

The emergent themes from the data were: accessibility, site attributes, variety, social interactions, meccas, learning, exploration, and escape. These were then grouped into dimensions labelled: physical site dimension, social dimension, and experiential dimension to provide insight into the place meaning for outdoor climbing sites (Figure 4.1). Research findings demonstrate that there are specific characteristics that the interviewees used to choose their climbing sites and upon which they constructed place meaning. This chapter explores these distinct themes ending with the conclusion that climbing place dimensions are individually relevant yet simultaneously interrelated.

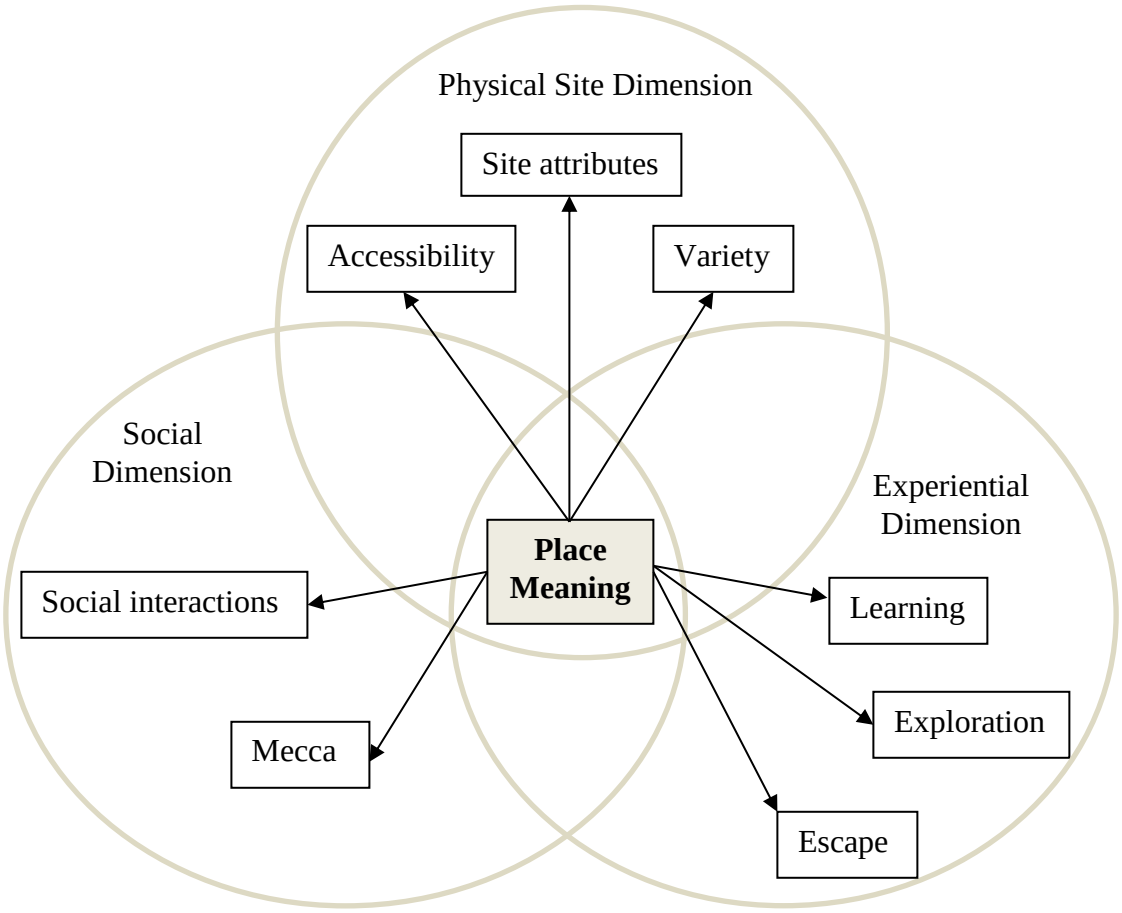


Figure 4.1. Organizational layout of outdoor rock climbing themes.

Physical Site Dimension

The activity of rock climbing requires specific physical features which meet the requirements of the climbers. The absence of some features and the presence of others can enhance or detract from a favourable climbing experience. During the interviews, climbers described a variety of physical characteristics that were noteworthy aspects of their outdoor climbing spaces. The themes included: accessibility, site attributes, and variety, all reflecting the important physical

dimensions that the interviewees associated with their outdoor rock climbing activities.

Accessibility.

The theme of accessibility was repeated throughout the interviews. It focused on accessing the climbing area and the climbing routes. In evaluating where they would climb, participants' often highlighted geographic convenience (e.g., distance) as a factor for choosing various climbing places. The participants were quite aware of where their climbing places were located in relation to their home, school, work, travel accommodations, other climbs, and other amenities. They appreciated geographic proximity and frequented specific climbing places that were nearby.

Participants experienced both opportunities and constraints in terms of proximity and travel time, climbing time, and climbing options (Table 4.1). Nearby climbing opportunities permitted easy access but more importantly, they provided more options for the negotiation of time constraints. This is consistent with research that indicates that close proximity to an individual's home and frequented recreation places encourages repeat visits. In contrast, long distance travel and a dispersed spatial distribution of site constrained climbing options. As a result, place attachment develops in relation to those sites which are more accessible (Moore & Graefe, 1994; Wynveen, Kyle, & Sutton, 2012).

Table 4.1

Convenience opportunities and constraints

Opportunity	
Close proximity	" I go there . . . because it's about 10 minutes away from where I work" (Participant 11)
Increased climbing	"Yeah a typical day, since we were camping near the climbing site itself . . . we are able to get in . . . a good . . . 6 or 7 climbs" (Participant 16)
Multiple climbs in the vicinity	"we could have spent every day doing something new" (Participant 5)
Minimal time commitment	"We can just go and climb and if you want to eat something . . . you just have to walk back . . . [to] the campsite" (Participant 12)
Constraint	
Long trip/travel time	"there were four different bouldering areas that have been developed and . . . you have to drive to all of them from the campground which . . . wasn't that good" (Participant 18)
Minimal climbing options	[there is] ". . . no climbing to really mention within 4 hours of Edmonton" (Participant 19)

Interviewees discussed how they accessed their specific climbing places through various modes of transportation including boat, car, walking/hiking, plane. The transportation used to access the climbing place was important because it had direct implications on the amount of time available for climbing. Transportation also influenced climbing partnerships because it affected who could participate and was influenced by associated travel costs. Access to climbing places is associated with the geographic convenience as discussed above, but stood out within the transcripts because interviewees discussed the details surrounding their outings and travel to their climbing places. For example Participant 10 explained the positive and negative considerations of access:

> a good walk in is a hike where you . . . go through a lot of the boulders that you're going to be climbing to get to other problems . . . it can't just be . . . kind of walk up and you drop right into one boulder and it's just like 'well I saw nothing when I was coming in here'.

Impediments to access tended to be a negative or constraining factor. This is consistent with other studies that have identified that climbers value accessibility (Hanley et al., 2002; Murdock, 2004) although difficult access is less of a deterrent for climbers with a high level of recreation specialization (i.e., dedicated rock climbers) (Merrill & Graefe, 1998). Potentially, the skill (e.g., level of ability) and years of climbing possessed by the interviewees placed them at a high level of specialization (Appendix C). Therefore, they were aware of their climbing options which could minimize any climbing related constraints.

Participants periodically mentioned the costs associated with climbing while discussing the accessibility of climbing and climbing places. Often the climbers were looking for various means of making their climbing outings more affordable. Climbing site choices were influenced by the cost of user fees (e.g., camping and accommodation, park passes) and further to this, Participant 5 explained the attractiveness of low travel costs:

> I would definitely go back simply because it is super accessible . . . I mean flights into Vegas right . . . like there's always sales going there, the camping is $5.00 a night and . . . it's like 2 miles from the crag, so all you have to do is rent a car basically, you know if the flights are all right you could be there under $200.00 easy.

While costs associated with climbing tended to be viewed as a constraint, some climbers negotiated these costs by staying with family and friends, camping, and searching for cheap restaurants, transportation, and accommodations. In contrast, Participant 10 commented "we're going to wing it and spend as much money as we need too and see how it goes." For this respondent the climbing trip experience was more important than the associated monetary expenditures. In negotiating these constraints, participants demonstrated a learned behaviour about travelling and climbing because they also learned how to "improve" future trips (see experience dimension: learning).

Under the accessibility theme, outdoor climbing sites were evaluated on geographic proximity, available climbing time, opportunity for multiple routes, and costs, all of which are embedded within the meanings of various climbing places as identified by the interviewees.

Site attributes.

Interviewees often discussed climbing site attributes in detail when they were describing their climbing places. Interactions and immersions with the environment and its physical attributes (e.g., climbing setting, physical layout, and textures) formed the essence of this detail. Interviewees were aware of their surroundings and were appreciative of aesthetic and scenic elements along with the functional aspects of the site.

The setting of the climbing sites tended to influence the interviewees' climbing based experiences and helped form place meanings by building a

connection between the activity of climbing, the setting, and the climbers. For example Participant 9 reflected that:

> you're in this sublime landscape which obviously has particular scenic value, so . . . not only are you climbing . . . and that there is abundance of good quality boulders to climb, you're climbing . . . in a larger area that's spectacularly beautiful and . . . you are in these landscapes that are pretty much extreme . . . in the sense that they are vast. You got vast flat deserts . . . right beside . . . massive ramparts of . . . granite mountains that jut up from the desert.

Often the atmosphere created by the interaction of the physical dimensions set the tone for the climb, the day, and the trip. This finding is consistent with those of Kruger (2006) who found that scenic recreation settings are an important part of the foundation upon which place meanings are established. Consistent with other research findings, this study's findings indicated that interviewees were using the setting and scenery to contribute more detail to place meanings. Waldrup and McEwen (1994) explained that while all groups of climbers (e.g., sport and traditional) appreciated a wilderness experience, the traditional climbers rated the scenic quality highly desirable. Furthermore, Hanley et al. (2001) noted that "Climbers are willing-to-pay more for climbs that are located in areas with better scenic quality" (p. 458). That said, within the current study, interviewees found less developed outdoor sites desirable as well.

Climate, particularly in terms of temperature, was another aspect of the physical attributes of the setting that underplayed the interviewees' place

meaning. They described the influence of the climbing place's temperature on their climbing experiences. Interviewees highlighted the hardships of cold and hot air temperatures, the temperatures of the rock (e.g., cold holds) and climbing behaviours influenced by the location's temperatures. A few interviewees even mentioned that it was possible to enjoy rock climbing outside during the Canadian winter. For example,

> You can go out to the White Buda[7] sometimes or even Big Choss and its warm . . . well it's not warm but it's like plus 2 so you can stand in your down jacket and get on a problem in a sweater. (Participant 10)

This place familiarity provides an example of the interviewees' high level of awareness about their surroundings. Furthermore, this willingness to climb outdoors in Canada in the winter is contrasted by climbers who made a concerted effort to travel to warmer destinations. This is consistent with other recreationists who often travel because their home site does not offer the desired recreational opportunity (van der Zee, 1990) at certain times of the year. Interviewees were aware of specific sites which offered a favourable climate and temperature for outdoor climbing. For example, presumably it was the warm regional Chinook winds that made winter rock climbing possible at White Buda and Big Choss on the eastern slopes of the Canadian Rocky Mountains, as noted by Participant 10.

The interviewees' tended to focus on the layout of their climbing places which suggests place dependence as they searched for specific functionality of the sites. This focus also influenced the interviewees' perceptions of place meaning

[7] White Buda is near the Powderface Creek Trailhead in Kananaskis, AB and Big Choss is near the base of Mount Yamnuska (Norman, 2006).

associated with their climbing places. This included the interviewees' preference for sites with multiple uses or functions as exemplified by Participant 5 who described a lunch site at one of his meaningful climbing places,

> that place is really cool, just because that river and you're in the canyon and it over takes you and . . . if this boulder wasn't in the middle of the river it would be a great boulder [to climb] too. You kind of jump across a few rocks [and] you're on top of this boulder . . . in the middle of this river and you're in this canyon that . . . the walls face each other east west.

Participant 5's portrayal of the lunch site demonstrated the climbers' high level of interest and attention to detail of the climbing sites. In fact, interviewees demonstrated a preference for separation from built features that were not related to climbing. For example, Participant 16 stated that "the fact is that I really liked . . . how there's just tons of conifers trees . . . you don't see any roads . . . you're just really isolated." Often interviewees indicated an interest in "communing" with nature including wildlife and plants. This finding is consistent with the view that recreation "[s]pecialization does not seem to have any relationship to "presence of bolts," "degree of naturalness," "not seeing manmade features on the climb," and "natural condition of climbing route" (Merrill & Graefe, 1998, p. 42). In the case of outdoor climbing places, place meaning combined functionality with perceptions of naturalness. Furthermore, interviewees were also aware of other rock characteristics that were focused on rock formations (e.g., marbling, swirls), rock density, and colours and the shape of the walls, cliffs and boulders

influenced the climbers' perceptions of place and experiences. For example, Participant 19 described a boulder called "L'éléphant":

> And from a certain angle, it looks like this enormous, two-storey elephant. [Interviewers comment removed]. You could not believe how perfectly it looks like an elephant. So there's just these completely abstract rock formations, they look like it's out of Dr. Seuss.

Rock types, formations, and holds were important to a majority of the interviewees. It was important for them to identify the type of rock and routes in their narratives. Often good routes were labeled as being "meant to be climbed."

Place attachment and place identity have been linked to connections with and respect for individuals' special places and the interviewees appreciated environmentally friendly and socially responsible behaviours occurring in all climbing places. This is exemplified by Participant 19's perspective of climbers' behaviours,

> Climbing is loving these rocks and respecting nature and trying not to leave a trace. I know it's kind of sounded like pretty granola here and that is the mindset of climbers, whether they're not aware of it or not, as someone that's an outside observer to those climbers as an indoor guy, that's what I observed. There's a love of that and that's why I think climbing is just an amazing sport.

The interviewees noted that odours and visual disturbances (e.g. litter and cleanliness) could alter their experiences and therefore place meaning. Low and Altman (1992) and Gaffney and Bale (2004) explain that an individual's senses

influence that person's perception of place. For the interviewees, their senses often connected to the site and influenced the meaning they formed about particular climbing places. Furthermore, through pro-environmental behaviour they appreciated and noticed site attributes and climber behaviours that reflect environmental responsibility. Similarly, Brymer, Downey and Gray (2009) found that "extreme sport participants develop feelings of connection to the natural world" (p. 93).

Study participants were not specifically asked about climbing safety or about the associated risks of climbing, however, some interviewees mentioned that climbing can be a risky sport. Participant 20 explained "Well, I mean . . . you have to expect accidents to happen climbing and you just have to try to minimize them as much as you can." Being aware of their surroundings was an important strategy, which included knowledge about their climbing partners, other climbers, spectators, and physical elements (e.g., weather, remoteness, stone type, strength and texture, protection available and the base of the climb). Place meaning therefore included safe climbing considerations based on site features.

Through site attributes, the interviewees interacted with and were immersed within the climbing sites. The features attracted and engaged the interviewees' senses which in turn influenced their perceptions of the places. On the macro scale, the broad site features and the atmosphere (e.g., scenery) were emphasized. At the micro scale, the geology (e.g., rock types), routes, holds, and site layout were the focus. Places were not just for climbing; they were also for fitness, relaxation, and socialization and therefore became repositories of

experiences and memories which ultimately contributed to place meanings. However, when the outdoor climb did not meet the climbers' needs, they tended to relocate to a place that did meet their climbing requirements. Therefore, the composition of the site attributes were one component of the place meaning of climbing sites.

Variety.

In choosing where to go climbing and which routes to climb, participants demonstrated a preference for sites and routes that offered a variety of climbing options. They discussed the uniqueness of the climbing routes and crags with a preference for a variety of routes, rock types, and other options. Interviewees were fixated on the types of holds (e.g., finger pockets, jugs, crimps, slopers, and cracks) which influenced the activity of climbing. For example, Participant 17 demonstrated the climbers' interest in different textures and characteristics: "But it was . . . this beautiful bare slab on the grit stone which you just stick too." Whereas Participant 16's "gallery" metaphor explained variety, accessibility, and route choice,

> I mean . . . it's kind of like a gallery. You just have to walk down to get to different grades . . . you don't have to . . . search around for other . . . routes . . . like you . . . would have to at other crags and . . . it's almost like one direct straight line of just perfect climb or of good climbing.

Interviewees' remarks about the importance of variety in regards to route selection are consistent with previous climbing research (see Burg, 2005). Participants identified unique experiences or sites and routes that were unlike

what they encountered in their "regular climbing." Some participants identified these differences by comparing various places while others went into detail about how the climbing experiences themselves were different at new sites than at their usual climbing places. Participant 10 explained,

> It was . . . kind of like an out of body experience . . . I couldn't believe I was there. I was so sore from the car ride like everyone was and you're so tired and you just can't believe you're there and you want to go climbing and it's just kind of euphoria . . . you don't really know what to do with yourself except to be happy and . . . just take in everything and as we drove into the Buttermilks for the first time . . . we were just so excited and you step out of the car and you're in another world.

This quote emphasizes happiness, extreme enjoyment, and excitement associated with experiencing new places. Such sites were described as "another world." Participants highlighted the attractiveness of novelty in climbing places. This view was also reflected in the literature. Asci, Demirhan, and Dinc (2006) explain that climbers search for new and unique experiences that will result in positive climbing experiences. Frauman and Clevenger (2010) suggest that boulderers "scored fairly high on thrill and adventure seeking and experience seeking" (p. 32) scales. Furthermore, people are dependent on places which they identify as unique or as providing unique experiences (Gibbons & Ruddell, 2009; Gunderson & Watson, 2007). Climbers appear to be continually searching for this outdoor novelty. For Participant 9, the return to the local climbing sites after visiting new places typically resulted in new perceptions about "What great stuff

we have here [in the Rocky Mountains]." The interviewees asserted ownership of the local climbing resources when they comment "we have" specific site or climbing features. This also demonstrates that they have knowledge of and a dependence on other climbing places to meet their climbing lifestyle needs because they are aware of their needs and available climbing options. The place, whether local or distant, becomes embedded with a collection of meanings that can inform resource managers and other users about the importance of the place. Furthermore, the comparisons between places influence the interviewees' perceptions of the climbing places as well as their experiences.

The interviewees' interest in having a variety and novelty of climbing options were supportive of the findings of Asci and colleagues (2006). The variety theme revealed the interviewees' desire for various climbing experiences. Under this theme, places were infused with meanings through perceptions of varying climbing elements, comparisons to their normal climbing places, and novelty. Interviewees appreciated the familiar and the unique as long as it was recognizable (e.g., through the route rating system). Furthermore, the novelty of the sites appeared to infuse climbing sites with excitement and importance.

The physical dimension of the climbing site created the opportunity for social interactions and climbing experiences. In combination with the activity of climbing, they helped interviewees to construct place meaning. The accessibility theme indicated that interviewees were articulating place meaning based on the physical site dimension of the climbing places with specific reference to accessibility, costs, and safety. The theme of site attributes revealed that these

sites were not simply physical objects to climb. Interviewees had specific desires and necessities which they used to evaluate the sites. Place meanings were also influenced by the interviewees' senses through their interactions with the sights, smells and textures they encountered while climbing. The variety theme suggested that the meanings for valued climbing places contain a multitude of elements from which the interviewees create a list of likes and dislikes which they use to compare their usual climbing place to new climbing places. In essence, the physical site dimensions are both a factor for and a context in which the activity of climbing occurs and place meanings are constructed. Place meaning for outdoor climbing sites specifically focused on physical elements related to a site's accessibility, attributes, and variety of climbing options. The physical site dimension is one portion of the meanings ascribed to outdoor climbing sites.

Social Dimension

The social dimension emerged through a variety of related but distinct climber interactions including both inclusion and avoidance. This is interesting because place meaning (Bale, 2003; Fishwick & Vining, 1992; Kruger, 2006; Williams, 2008) and place identity (Sandberg, 2003) have been found to be influenced through social interactions. The interviewees described climbing as a social activity wherein they expressed a willingness to both engage with and to avoid other climbers and individuals at climbing sites. These relationships are captured under the social interactions theme. Interviewees also provided insight into how the general climbing community acknowledged and defined important climbing places and routes within the climbing meccas theme. The interviewees

appreciated, respected, and sometimes collected these important routes and climbing meccas as a form of climbing based consumption.

Social interactions.

The social element of outdoor climbing tended to consist of climbing interactions "within" climbing groups which differed from interactions "between" climbing groups. The interactions "within" groups was illustrated by groups that provided support and motivation for people to go climbing and to improve their climbing in a nurturing and friendly atmosphere. At times climbers' strongly embraced mentorship from those with more experience as Participant 5 explained:

> well my first big climbing trip was . . . with about 8 people and we went down to Red Rocks in Nevada and that was a cool experience . . . I was easily one of the weakest climbers there so climbing with a lot of really good people . . . you just learn a lot, and it was one of my bigger trips ever so it's . . . a big learning processes and [I] experience[d] a lot of different things.

Interviewees noted the importance of climbing mentorship within their communities. This is consistent with Kruger (2006) who argued that such community and social interactions are an important component of place meaning. These climber encounters occurred when an individual or group helped climbers improve their climbing ability or provided beta.[8] This perspective is consistent with Freischlag and Freischlag's (1993) findings that people are typically introduced to rock climbing through climbing friends. Climbing partners

[8] Detailed information about a climb shared between climbers (Samet, 2013). For example, how to complete the hardest section of the route/problem.

undertake a crucial role in rock climbing for social support, safety and knowledge. This finding is corroborated by the work of Hanley and colleagues (2001) which found that the climbing background and the character of one's climbing partner influences climbing site choice. Furthermore, interviewees demonstrated that the distinction between one climber and another was occasionally based on an individual's safe climbing practices and suitability as a partner which were requirements at specific sites or because of specific climbing styles (e.g., sport climbing or bouldering).

However, there are exceptions to the "within" group inclusion that took the form of "between" group interaction at the climbs. For example, Participant 4 described Squamish, British Columbia, as a place where

> everyone works on the same problems. Like you go to a problem and there'll be 5 or 6 people working the same one . . . if you fall you don't even hit the ground . . . people just like catch you and . . . place you back on the ground.

Similarly, around campgrounds climbers typically interacted with other campers, often sharing local information (e.g., where to get cheap food), climbing stories, campfires, meals, and travel stories. For example the campground near Squamish, British Columbia, was described by Participant 4 as being,

> a cool campground, the campground is really small but pretty much everyone in the campground is there to climb . . . [Interviewers comment removed] . . . and there's one . . . big communal cooking area with storage

> to put your food into and stuff. So you go climbing and everyone cooks at night together and hangs around the fire.

It is possible that interviewees are accepting of intergroup interactions in the campgrounds because their specific climbing experiences have already been met or that these interactions foster the desired climbing experiences through shared knowledge. Perhaps the built environment of a front country campground could also be characterised by similar social behaviours as found in other open recreation spaces.

Interviewees were usually comfortable with nearby climbers, especially those within their group, but they expressed concern about crowding. Crowding was influential in interviewees' experiences in terms of socialization, being watched, route access, overuse, and environmental degradation. At outdoor crags, crowding issues and the strategies used to address them were highlighted by Participant 9:

> I don't like the crowds, always sucks having to wait to get on something although . . . I've never really had too much problem with crowding. The more popular areas, the more . . . peak seasons . . . will be more crowded than not but, you kind of factor that into to where you are going.

Although he was discouraged because of crowding at the outdoor crag, he factored the crowding into his expectations and trip planning. He also alluded to being displaced because issues of crowding factored into his site choice. Participant 5 explained the difference between indoor and outdoor crowding issues:

> I'm sure people hate it when I climb cause I am loud . . . but whatever, you just deal with that in the indoor session. Outdoor session it's easier to escape that, kind of move down . . . unless it's a small crag, there's a lot of space.

Similar to Participant 5, other interviewees expressed an interest in finding solitude while climbing, especially in outdoor climbing. Typically interviewees did not mention solitude, but the avoidance of other climbing groups was apparent in their behaviour and climbing site choice. For example Participant 5, above, mentioned he will "move down" the cliff for separation from other climbers. Other research on climbers' perception of wilderness has similarly identified crowding as an important management issue for all types of rock climbers (e.g., sport, traditional, modern) and solitude as very important for traditional climbers (Waldrup & McEwen, 1994). According to Hanley and colleagues (2001), Scottish climbers ranked the level of crowding third on a list of important site attributes. Researchers have found that as place identity increases, the perceived impact of crowding at places also increases (Budruk, Stanis, Schneider, & Heisey, 2008) whereas place dependence is less sensitive to crowding (Budruk et al., 2008). It is possible that the climbers who are adversely affected by crowding identify with specific climbing places and are searching for solitude. Conversely, some interviewees accepted crowding as part of the experience of climbing at a specific site indicating a higher degree of place dependence. Hutson and Montgomery (2010) postulate that solitude can be an individual perspective within place meaning. Demonstrating social avoidance in outdoor settings and

possible place identity associations, Participant 2 discussed aspects of familiarity by possessing detailed knowledge about the climbing environment. She perceived an ideal climbing site as a section of ocean cliff that she discovered at Railay Beach, Thailand:

> It's like . . . this one . . . place was almost mine you know like I was the one who found it. I was the one who travelled this new route that no one had ever seen before. Well that's what I tell myself.

Participant 2 exemplified the motivation and desire to develop new climbing routes and areas while experiencing solitude and intimacy at the site. This motivation is consistent with Halbert's (2010) view that climbers have an inherent desire for solitude, and new routes to climb. The importance of secret climbing places was also reported by a rock climber in the Niagara Glen, Ontario, in a study by Hutson and Montgomery (2010). Participant 2 was cognizant of the place meanings that had been produced and communicated through the global climbing community about Thai climbing sites. Through her experiences at Railay Beach, she was able to personalize the place meanings, specifically in relation to reduced crowds and solitude at this location compared to other places. Her interactions with other climbers (e.g., crowding) influenced her experience.

The social interactions of the interviewees were at times also connected to aspects of a pro-environmental behaviour and community building. Participant 19 mentioned rock climbers are inherently respectful of the natural environment (see the site attributes theme within the physical site dimension). Furthermore,

Participant 6 explained the connection between social interactions and pro-environmental behaviours:

> I know one of the climbers that sort of developed this area, Greg . . . and I climbed with him and his family a few times and you kind of like to be there with the people who kind of battled the bush and. . . watching [my boyfriend] sort of contribute. . . . [I]t felt like kind of a community and I've been . . . to . . . the Lost Boys in Jasper as well after a storm and. . . [my boyfriend] was clearing the trail and then further down there was two other climbers doing the same thing. So, that kind of . . . lends itself to . . . community building.

The interviewees' conscious effort to develop climbing areas, establish sustainable trails, and respect nature demonstrated a tendency toward pro-environmental behaviours. Furthermore the teamwork involved established a connection to the sites climbing community.

This study showed that the interviewees were influenced both positively and negatively through their social interactions with other climbers and individuals (e.g., tourists) within their outdoor climbing places. These findings are also consistent with a behavioural analysis of sport climbers conducted by Fleming and Hörst (2010) which concluded that social interactions (e.g., encouragement) are an important factor of climbing. Climbing is typically a small group social activity where climbers willingly associate with only their climbing group and not all the climbers at the crag (Halbert, 2010). The interviewees emphasized how place meanings are influenced by social

interactions which are congruent with Kruger's (2006) findings. Similarly, Kyle and colleagues (2004a) found that social interactions based on an activity increased the emotional attachment to a place, a factor which could also influence place dependence.

Meccas.

The meccas theme was associated with outdoor climbing places and highlighted the iconic status attached to certain locations and routes by the climbers and the greater climbing community. Williams (2008) describes this as a socio-cultural construction. Some interviewees used short descriptions of the place which emphasised dimensions of identity. For example, Participant 4 stated that the reason that she and a friend went to Squamish, British Columbia, to boulder was "Well Squamish is, like everyone knew Squamish right?" and "You read climbing magazines and everything about bouldering is about Squamish, and everyone who's gone to Squamish comes back [and] says amazing things about it, so it was pretty much the only choice." Other interviewees went into detail to explain the importance of the place in terms of climbing by discussing aspects such as important climber accomplishments (e.g., historical figures and celebrity climbers), and climbing history. The history of the climbing site was also important for Participant 19, who described why his experience at Fontainebleau, France, was memorable:

> Not so much because I climbed brilliantly, or because the weather was amazing, but it is the birthplace of bouldering. It's . . . the home of

> bouldering, that's where bouldering started . . . in the forests of Fontainebleau.

He continued "that's the most special place in the world. I think." While interviewees had various reasons and explanations for why they wanted to climb at places that were positively profiled in rock climbing culture, they all suggested that the places themselves were a strong motivation. This example of place related distinction can be associated with place identity (Twigger-Ross & Uzzell, 1996) where the interviewees' identity is established through their climbing places. Similarly, the interviewees' interest in the history of climbing is representative of heritage sport tourism (Ramshaw & Gammon, 2007) and nostalgia sport tourism (Gibson, Willming, & Holdnak, 2003) where individuals plan trips to sport places (Gibson, 1998). Climbing at these sites may have something to do with engagement and authenticity. For example, research by Hutson and Montgomery (2010) found that recreationists desired inclusive experiences with the Niagara Escarpment. These recreationists were not concerned with its history unless they were "a part of that history" (p. 433). Conversely the interviewees in this study acknowledged the history and importance of the climbing places while potentially shaping and contributing (e.g., Participant 19) to the history and meaning of place through their actions and experiences. Furthermore, Sherman (1999) explains in the *Stone Crusade A Historical Guide to Bouldering in America* that "the best way to visit any bouldering area is to get a tour from the locals" (p. XXXII) because they will share the history and nostalgia of the area. Sherman further highlights the

influential role of social interaction within climbing and the identification of important climbing sites.

Another dimension of the meccas theme was the importance of specific routes, often identified as "classics" or "star problems." Avid alpinist and rock climber, Participant 9 described how a classic climb is established:

> a climb is made classic by a number of different things . . . the quality, it's positions . . . the sequence of moves, and . . . if it's got all of those things or some of those things . . . its deemed obviously a really good, high quality climb.

Karlsen (2010) makes a similar claim, "If other climbers, then, also have the same experience, the route's beauty will be widely acknowledged; it will become a classic climb" (p. 228). Participant 10 explained that the attraction of climbing in Bishop, California, was to complete the climbs of a specific ability which also had the "classic" identifier:

> one of them was the Ironman Traverse; it was a V4 um pretty much the most classic problem. If you've been down to Bishop you'll know the Ironman Traverse for sure. It is a boulder that is maybe, nine or ten feet high, and right down the middle of it there is a ridge that . . . starts off . . . about maybe a palms length . . . wide and it slowly tapers off. It runs up. It was pretty much put on this earth to be climbed.

Similarly, Scottish climbers stated that the most important aspect of choosing a climb was its star rating (Hanley et al., 2001).

The participants' descriptions of climbing meccas can be associated with the place-referent continuity (Twigger-Ross & Uzzell, 1996) where their experiences and accomplishments at particular places, specifically at culturally defined climbing sites and routes or problems, influence their place identity and identity as a climber. Interviewees often highlighted their experiences and accomplishments as markers in their climbing "career" or abilities. Specifically, some interviewees used climbing meccas and or classic routes to mark a new stage of their climbing ability and identity therefore linking themselves to climbing places. They evaluated the climbing site on their perceived ability and by comparing the meccas and classic routes to other climbing places thereby exemplifying place dependence. Furthermore, Kyle and colleagues (2003) found that an increase in hiking identity resulted in a greater dependence on the Appalachian Trail. Therefore, interviewees' climbing identity was potentially connected with their climbing places and they associated accomplishment with an increased dependence on specific sites. Interestingly, previous research on rock climbing has not explored the place meanings associated with the importance of climbing meccas and influential routes, even where there is crossover between climbing meccas and motivations to go rock climbing. The literature does suggest however, that other outdoor recreationists have likewise identified specific areas as recreation meccas, for example mountain bikers' perceive Moab, Utah as a mountain biking mecca (Brehm, 2007; Fix, Loomis, & Eichhorn, 2000). This study begins to highlight the importance of meccas within adventure activities such as rock climbing.

The social dimension was influential in assisting the interviewees' interpretation of previously existing place meanings and contributed to personal perspectives on climbing. The social interactions of the interviewees involved occurrences of inclusion with and avoidance of other site users. Through social interactions the climbers created friendships, improved as climbers, and assisted others (e.g., mentorships). Climbing places became places for social interactions and the meanings for those places focused on creating and understanding a balance between friendships, partnerships, interactions and avoidance, and community. Furthermore, the climbing community evaluated and designated labels such as classic and star rated climbs which helped to establish the desirable status of climbing meccas that attracted many of the interviewees. In some cases, interviewees were able to incorporate their accomplishments and experiences from the climbing meccas as part of their own climbing identity. The place meaning of the climbing meccas was a "badge of honour" for some participants as well as a travel and climbing motivation for many.

The social dimension contributed to the meanings of climbing places through the interactions of the interviewees but also through the interviewees' perceptions of the place meanings applied by the broader climbing community in relation to specific climbing sites. The interviewees demonstrated that climbing is a social activity and that social interactions helped the interviewees to navigate existing place meanings and to form new ones.

Experiential Dimension

Climbing involves an intimate interaction between the climber and the climbing site. The experiential dimension encompasses the themes of learning, exploration, and escape that emerged from the interviews. The experience of climbing is a place based learning experience and often involves various opportunities of exploration.

Learning.

The learning theme is based on what climbers indicated they had learnt through their climbing activities. These outcomes included skill acquisition, increased self-awareness, trip knowledge, and reformed strategies on where and when to climb. Interviewees were either actively or passively recording their climbing abilities and accomplishments. In doing so, they maintained a grounded perspective of their skill acquisition and increased self-awareness. Interviewees often highlighted skill acquisition and increased self-awareness in terms of technical ratings of past climbs or of climbs they were aiming to complete in the future.

Twigger-Ross and Uzzell (1996) explain that place-referent continuity involves an individual's reflections on how the environment is linked to the individual's perception of self and pervious activities within the environment. Consistent with this expectation, the respondents expressed how they chose climbing places and routes based on their abilities (e.g., place-congruent continuity). However, during the process of setting future goals such as climbing a specific route or developing the required climbing skills, it is likely that their

perception of place and place identity also changed. Interviewees tended to associate their climbing identity with their climbing accomplishments and skills. Likewise, Heywood (1994) explains that sport (i.e., climbing) provides people with an identity. Similar to place-congruent continuity (Twigger-Ross & Uzzell, 1996), the interviewees used specific but transferable place characteristics to construct their self-image. Twigger-Ross and Uzzell do not discuss the influence of goal attainment or goal establishment on place identity, however, several interviewees identified routes or route grades they would like to accomplish in the future, a practice which has implications for the selection of climbing sites and their own place identity. In a related study, Gibbons and Ruddell (2009) found that non-motorized backcountry users established goals specific to settings and place dependence. This provides further support to the view that the interviewees were choosing specific climbing sites and that place dependence and place identity were influenced by their climbing abilities and goals. Smaldone and colleagues (2005a) suggest that an individual's life stage influenced and or changed their perceptions of place meanings. The interviewees in this study demonstrated that their perceptions of place and place dependence also changed over time in association with their abilities and interests. Some interviewees also expressed a desire to return to distant climbing places to repeat a climb. For example, Participant 4 suggested she would like to return to Squamish to see if it has changed from when she first created her place meaning of it. She stated, "I'd be interested to see if it's still like that . . . [interviewer's prompt removed] . . . because climbing has gotten a little more popular."

Furthermore, the climbers discussed how they learnt new skills or how their abilities evolved through increased climbing and interaction with members of the wider climbing community. They took pride in their development as climbers. Specifically climbers either chose routes/problems that were challenging for their ability or ones that permitted them to "work on . . . weakness" (Participant 15). They were also aware of their limitations: "I'll probably walk around this boulder and look for something that I know suits my climbing style. Like . . . I'm sure there's some V3s out there that . . . could kick my ass just because they are not my style of climbing" (Participant 5). As their climbing ability evolved, the interviewees expressed more self confidence in their identity as climbers. Their climbing activity helped to define aspects of who they were. They expressed an ability to continue learning about themselves, their comfort zones, their climbing, and their surroundings. For example, Participant 12 explained "my personal style is . . . crack climbing and really tiny pinches . . . I excel on those kinds of routes." Participant 21 described how new skills influenced his climbing experience,

> Because we weren't really trad[9] climbing very much back then. . . . And so . . . I had very little experience leading in trad. And then so, this time when we went back there I had a bit more experience and wanted to get on some of the classic, longer routes. So that's mostly what we ended up doing.

[9] Trad climbing is a method of climbing where the climber places climbing gear into cracks in the rock face. Also called traditional climbing.

The above quotes from Participants 12 and 21 refer to past experiences, knowledge of the self, and previous activities within a place, exemplifying what Twigger-Ross and Uzzell (1996) described as place-referent continuity.

Interviewees learnt about themselves and about how to succeed on their trips. Trip knowledge included reflections about a trip once they returned but also how they prepared for the trip, climbed, and traveled. Through observations and experiences climbers learnt where and when it was appropriate to climb. Their comments focused on strategies to avoid crowding by choosing specific times of day, on how to make the most of a climbing outing, and on responses to weather. Interviewees discussed various methods of avoiding crowds, some of which involved learning the characteristics of the crag and learning which times of day and or week were the best times to go climbing there. Similarly, they discussed the influence of access as a factor which limited crowding. For example, long approaches to the base of the climb were associated with fewer people at a climbing area.

Interviewees discussed how they organize their time to make the most of a climbing outing. Some of them avoided situations where they were expected to teach people to climb on longer trips because that interfered with their own climbing experience. Others explained the importance of pre-trip research as a method to maximize climbing time and enjoyment on the trip. For example, Participant 1 reflected on what she learnt about traveling to climb and pre-trip planning, saying “I think I would go and probably [be] a bit more prepared . . . kind of scout it a little bit, what rocks I’m going to do, level of difficulties. So

I'm not just trying stuff out of my league." Similarly, prior preparation was important to Participant 10, who had this to say about a trip experience:

> Definitely . . . knowing now that the community is always there to . . . get into and to climb and knowing now . . . well kind of having an idea [of] what to do when you go . . . on a trip like that. Like it was kind of the first trip for all of us. We didn't really have any idea of what to expect.

Interviewees were impacted by the weather and climate during their climbing time which required pre-trip planning and influenced trip knowledge. Participant 6 described her second rock climbing trip as memorable because of the weather,

> my second one wasn't so good because . . . it was cold and we were at the boulder, the Rock Gardens in Jasper and it doesn't get any sun so it was really really cold. And so my hands were numb, my toes were numb, and [my boyfriend] put up a route I just couldn't even do it because I was freezing, so we went to the Boulder Gardens and there was sun.

Later, she explained how their perception of the climb was influenced by this experience of the sun and cold rock: "We didn't think about things like sun and that kind of thing. But now we do." She continued, "now I know to look for the south facing crags in the early or late season but I didn't know that then." Just like Participant 6 and her partner, Participant 20 also recognized that the micro climate and conditions can influence climbing: "[S]ome of the front routes get the sun earlier in the day. And then the sun kind of moves around so we tend to move around wherever the sun is." While some interviewees chased the sun at a

particular site during a climbing day, others traveled to warmer locations during the winter. Commonly reported trips that were influenced by seasonality were to Joshua Tree, California; Red Rocks, Nevada; and Bishop, California. Knez (2005) explains that climate is an important component of place meaning for residents, however, he does not discuss the influence of climate in terms of the place meaning of recreationists and travelers. The interviewees in this study actively considered the climate of local crags and destinations when choosing where and when to climb. Typically they were attempting to climb in comfortable climatic conditions.

Interviewees demonstrated intimate knowledge and familiarity for their climbing areas and surroundings, the routes details, and historical elements. Some interviewees described the crag or area in detail, providing names of routes, difficulty ratings and specific area uses. For example, Participant 8 described a climbing day at Dover Island in Nova Scotia:

> pack up, it's about a twenty-five minute hike across like a small boulder field. It's just along the coast so there's crashing waves and stuff as well which is pretty neat. . . . [T]he first area you hit is called the "Warm up area" and that's where you warm up normally. Ah so just some slabby boulder problems, like V3 V4 maybe . . . and then further along you hike along the shore the coastline. . . . [Y]ou get to more and more boulder problems . . . just more options.

The focus of Participant 8 was on how he moved through the climbing area to get to different problems after using the warm up area. Like other participants, he

mentioned important natural features, but many climbers went into more detail on the importance of nature beyond the rock by noting other geographic features, and the flora and fauna of the area.

Climbers also shared their knowledge about the history of the climbing area and region. Participant 19 described Fontainebleau's history as a recreation area for the people of France and how it evolved to be a place for the climbing community: "When it started they would make these things called circuits. . . . For them you get on the blue circuit and all the blue boulder problems would be around with the same difficulty starting with blue one." He added,

> So it's these tours, these tours of the forest. So if you were to go make your own circuit, first of all it would take, you'd have to be a local. You have to spend years and years there learning the forest, finding all these odd little hidden features or whatever and, you would draw out the story.

The history of an area influenced how the interviewees perceive a place. It also contributes to the iconic status of some climbing places depending on how the place has been used, who climbed there in the past (e.g., celebrity climbers), and the specific climbs recorded at the site. History and use can result in the designation of classic and star rated climbs. Research on place has highlighted the temporal dimension of place attachment. While the interviewees did not live in their outdoor climbing areas, they did frequent the climbing areas and often were able to gain an understanding of the history, features, and geography of the climbing place. Knez (2005) suggests that "prolonging one's stay at a place amplifies one's emotional bond to that place which in turn leads that a place

becomes more a part of one's place-related identity" (p. 215). This is also true of rock climbers—as they experience climbing places these places become part of their place identity.

Route descriptions provided by respondents included names, features, hold types and characteristics, and types of rock. These interviewees were quite proud of their accomplishments and reflected on their past climbs by name or as markers in descriptions and exploits. This practice resembles the sport tourist behaviour of collecting special places as a status symbol (Weed & Bull, 2004). Similarly, places are often consumed or collected because they are unique or represent status for travelers (Urry, 2008). Participant 10 modeled this practice with a comment about his climb in Bishop, California,

> There's some other ones that were harder . . . Jedi Mind Tricks is a thirty something foot highball[10] V4 highball . . . it just goes up this basically there's a flake on the whole front side and just follows the flake out . . . really cool. I got on the beginning of that but couldn't finish it.

Other participants provided details of memorable routes sometimes without mentioning them by name. The route's name was not paramount to the experience for some respondents as Participant 12 recalled,

> Yeah and . . . you get up and there's some nice little cracks and a ledge up here and then another crack and then this kind of little side jug that sticks out. And then there's a couple little side pulls and crimps all along the way up and but when you catch right here it just gets desperate because a lot of people have climbed it already and it's really polished.

[10] A boulder problem of above average height, which often increases the difficulty and risk.

While Participant 12 focused on rock shapes, other interviewees discussed various rock types such as quartzite, granite, limestone, and volcanic rock along with their various textures (e.g., rough, smooth/polished, prickly). Interviewees indicated preferences for some types of rock and interesting climbing routes with different rock types and dislike for others. Merrill and Graefe (1998) found that as recreational specialization increased, so too did the importance climbers placed on the route's characteristics. Williams and Vaske (2003) found that place attachment developed from familiarity, increased use, and perception about the place's importance. While the interviewees were not residing in or using a climbing place for long periods of time they identified a familiarity with and importance of their climbing places and displayed place attachment tendencies beyond place dependence and place identity. Here their familiarity was reflected in what they learned about the rock and the site in relation to their specific climbing ability and type. Similar to the current study's findings, Williams, Patterson, Roggenbuck and Watson (1992) down-play the importance of the length of time spent in a place and highlight the importance of the intensity and nature of the experience with the place in forming place attachments. The intensity of rock climbing helps to explain why the interviewees exhibited a place familiarity and climbing knowledge within their place meanings.

The learning theme revealed that the interviewees connected with their climbing places in ways that transcended the physical characteristics. They improved their climbing and trip taking abilities while acquiring a sense of the place's history. Place meanings were constructed in part on the participant's

accomplishments at the site and outlined future goals. Finally, learning influenced how the interviewees interacted with other climbers and used the sites where they climbed.

Exploration.

The interviewees also discussed how they made use of the area surrounding the climbing route. Often climbers emphasized the spontaneous nature of their trips or climbing days and the significant amount of time that they used to explore their surroundings. For some climbers, the decision to go on a climbing trip was relatively impulsive; they took advantages of an opportunity to join a group trip on short notice. For example, Participant 10 explained,

> my friend kind of said he wanted to go to Joshua Tree but then he's like 'You guys, I'm not going to Joshua Tree anymore, I'm going to go to Bishop' and then my other friend Ritchie was just like 'You're thinking of going to Bishop when?' and he's like 'In January that's when I'm going to Bishop' and I was like 'Oh man if you guys are going then I'm . . . going too'.

There was a social element to the use of the climbing areas which could influence place identity and place dependence (Kyle et al., 2004c) of the interviewees. However, discussions around spontaneous behaviours and climbing related to how interviewees made use of the climbing site and/or routes when at the crag. Several interviewees mentioned not being constrained by time or other climbers. Some even planned or allowed for unstructured activity in their trips or

experiences. Participant 12 explained the spontaneous climbing day when camping near the climbing area,

> It is pretty much centralized around . . . woke up and we ate breakfast, just kind of farted around the camp site and because the rock was so close we didn't really have to stick to the schedule 'okay we need to be out by this if we're going to have all day climbing in'.

Spontaneous behaviour was not limited to climbing near campgrounds. Some local or regional outings and longer trips were also influenced by spontaneous actions. For example, Participant 21 suggested that the climbing trip could be loosely structured,

> And then into Arizona . . . we just kind of Google it and . . . went with it, and stopped in climbing stores and look in guide books and . . . bought some guide books and stuff. And in that way, we just kind of found our way around.

The spontaneous behaviour associated with their activities influenced the way the interviewees interacted with climbing places. The freedom that outdoor climbers find desirable and obtainable within climbing (Scott, 2010) is reflected in the interviewees' spontaneous behaviours. Interviewees frequently discussed how they would explore the surroundings of the climb site and climbing areas. These activities included finding new climbing places, searching for other recreational options in the area, visiting local communities, and taking part in other tourist activities. Participant 11 described their day exploring the climbing area:

> We just throw our crash pads[11] on our backs and just start wandering around the beach and see what we would find. You know where we were the day before, or where we wanted to go next, and it's just kind of a little bit of an adventure.

The importance of the area surrounding the crag was explained by Participant 14:

> things can get too serious when it's just about the one activity that you're there for. . . . And . . . if you have places to kind of loosen up or take . . . [a] rest day or rest hour or whatever and then come back to it, I find the days are so much more fun.

Participant 8 recounted detailed memories of a climbing trip to Bishop, California, that included visits to bakeries and cafes for breakfast, grocery shopping, and eating out at restaurants. He also described how, why and when he would take opportunities to explore the city:

> there's a lot actually really famous kind of cool climbers from . . . Bishop . . . Canadian Peter Croft lives there now . . . Galen Rowell's Morning, I think it is called Morning Light; is his gallery[12]. So, his gallery is there and a lot of people go to it and it's, just like this pilgrimage. And for me . . . it was good because I'm an alpine historian and it was kind of cool to go there. So, in the evenings whenever everyone was doing, on Facebook, checking their email and doing all those sort of stuff, I was usually just wander[ing], and hanging out there and you know it was awesome.

[11] A foam mat placed on the ground to protect the climber during falls.
[12] Galen Rowell's gallery is called Mountain Light Gallery.

Other interviewees discussed visiting Las Vegas because it was in the vicinity of the climbing areas, visiting local recreation centres or going for walks to explore the climbing places beyond the climbing routes. A majority of the climbers interviewed demonstrated this sense of exploration. This form of exploration appears to be associated with place dependence as the climbers were choosing climbing places that offered opportunities for the non-climbing portion of their trip. Place meaning was not only associated with the climbing site but also the climb's surroundings and other recreation or tourist opportunities in the area.

Under the exploration theme the discussion focused on how the interviewees often embraced spontaneity and the drive to explore the climbing site and its surroundings. Within the narratives of the climbing experiences the place meaning revealed the importance of the climbing site for climbing and opportunities to be a climber. The interviewees' exploits might be connecting them back to the era when climbers were viewed as explorers and free spirits.

Escape.

Being outside was a draw for many interviewees, however, they also expressed an interest in escaping from the everyday lifestyle; "It's just a place where nothing else matters when you're there, just like you're climbing" (Participant 11). Similarly, Participant 17 described climbing as, "It's freedom. [Laughs] I guess. You get to go up things. You get to climb up basically." Lastly,

> It's not so much about the adrenaline. . . . [I]f I go on a climbing trip and we end up doing one climb and then just scrambling around, you're hiking

> up the valley and see where it goes for the day . . . [Interviewer's comment removed] . . . I'm happy with that. It's just a way to get out.

Interviewees appreciated the opportunity they had to climb in general, be outdoors, and escape the urban setting as well as their work and life responsibilities. They appear to be using climbing as a restorative experience. This fits with Swan's (2010) conclusion that climbers can find the climbing experience to be Zen-like in permitting a form of meditation and an escape from the everyday lifestyle. Furthermore, some extreme sport participants have expressed that through their activity they are "at one with the natural world or connected through a life enhancing energy" (Brymer et al., 2009, p. 193). Restorative experiences at favourite places have been described as relaxation, escaping the everyday, removing problems, and self-reflection (Korpela, Hartig, Kaiser, & Fuhrer, 2001). Korpela and Hartig (1996) and Korpela and colleagues (2001) found that a natural setting was typically identified as the favourite place for restorative experiences. The interviewees in the current study noted a change in their mood and perspectives by climbing and interacting with others in both indoor as well as outdoor climbing places.

The experiential dimension of climbing highlighted the actions of climbers and their use of the climbing places. Through various amount of exploration and desires to escape everyday stressors, the interviewees' experiences helped them to learn about themselves. They experienced personal growth through the development of their climbing skills and knowledge which included the climbing sites and their surroundings. Therefore, within the place meaning of climbing

places, the experiential dimension defines a site for learning through the act of rock climbing. It also included a sense of exploration and indicated opportunities for escaping stressors and day-to-day occurrences.

Conclusion

While the climbers were interacting with their climbing places, they were also constructing and reconstructing place meaning. The narratives climbers provided revealed three dimensions (i.e., physical, social, experience) to their construction of place meaning. Each of the dimensions represented specific aspects relevant to the climbers' activity and interaction with key place features (i.e., the themes). These climbing dimensions overlapped (Figure 4.2) because of the interrelatedness of the place meaning themes (see also Spartz & Shaw, 2011; Wynveen et al., 2012).

Figure 4.2 illustrates the overlap and interrelationship between the dimensions of climbing and their themes. While it is possible for each dimension and theme to be viewed independently, their interrelationship is important because the dimensions influence each other. The physical site dimension included the themes of accessibility, site attributes, and variety. These themes summarize the place meanings that emerged through the interviewees' climbing narratives. The physical site dimension provided the tangible elements of the places where the interviewees' experiences occurred (Figure 4.2 – section A + D). This interrelationship evolved in the place where the physical site dimension became the host for the experiential dimension. For example, the interviewees

motivation for rock climbing and exploration, an experiential dimension theme, were often influenced by specific climbing site attributes and the variety of climbing options (physical site dimension themes) available at the climbing place.

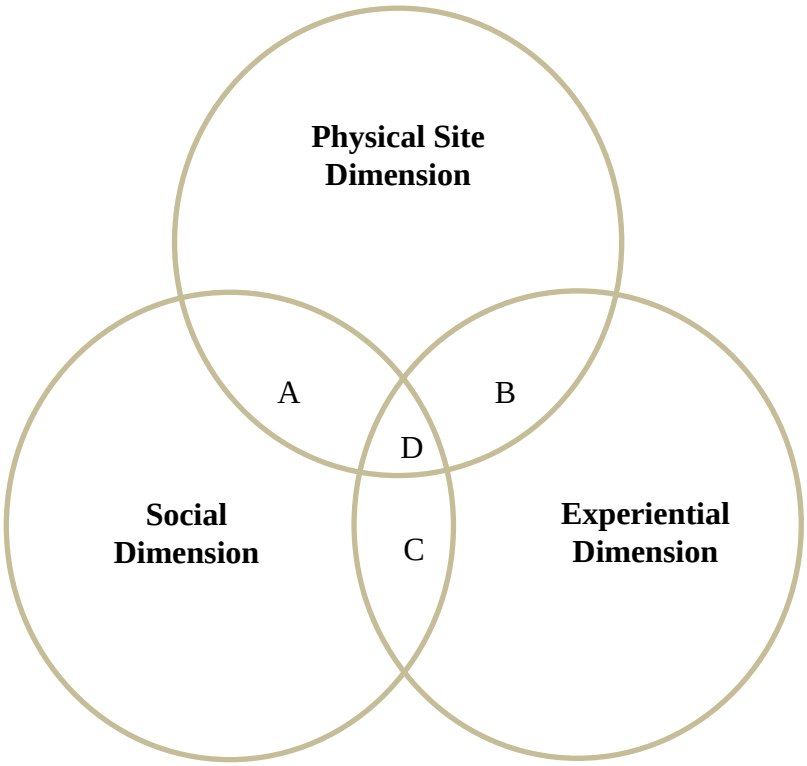


Figure 4.2. Interrelationship of themes.

The physical site dimension also has an interrelationship with the social dimension and its associated themes: social interactions and meccas (Figure 4.2 – quadrant B + D). The physical site dimension became a place for social interaction between the climbers, their climbing groups, and other site users. The physical site dimension also became a host to the place meanings that were informed by the global climbing community and led the interviewees to view certain climbing places as meccas (social dimension theme). Interviewees identified climbing meccas as sites that were important to the climbing

community and which contained specific classic or star rated climbs that influenced place meaning and the interviewees' identity as climbers. Similarly, the social dimension also influenced the physical site dimension where the interviewees explained that they desired outdoor sites that permitted social interactions (e.g., accessibility theme) and where the interviewees' social groups influenced where the interviewees went climbing and what routes or problems were climbed.

A noticeable interrelationship also exists between the experiential dimension and the social dimension (Figure 4.2 – section C + D). The interviewees recognized that rock climbing was a social activity where their experiential dimension was influenced by their social dimension. For example the social interactions, a social dimension theme, often influenced their learning (experiential dimension theme) through climbing mentors and experienced climbing friends.

Finally, there is an interrelationship between all three dimensions (Figure 4.2 – section D). At times one dimension might be a stronger influence on place meaning when interacting with another dimension. Furthermore, themes can also influence place meaning through the different dimensions for different climbers at different times. For example, the meccas theme falls within the social dimension theme because it has a social-cultural influence for interviewees. The various physical site dimensions were combined by the interviewees and the broader climbing community to identify which sites were climbing meccas. Furthermore, the meccas theme also indicated that climbing meccas, such as Squamish or

classic route designations for routes such as Ironman's Travers, act as travel motivators for travelling climbers. In this way the physical site dimension (including site attributes and variety) were influenced by the social dimension (including social interactions and meccas) which in turn influenced place meaning and how the interviewees experienced the climbing places through the experiential dimension (including learning). Place meaning is therefore derived from a combination of dimensions and themes taken from the interviewees' narratives.

Chapter Four illustrated the relationships between the different outdoor dimensions of rock climbing to show that the place meanings are interrelated within the interviewees climbing narratives. By focusing on place meaning, this chapter has addressed the first research sub-question "What meanings are ascribed to outdoor climbing sites?" It provided insight into the place meaning that the interviewees created, negotiated, and reinforced through the activity of rock climbing. The place meanings for outdoor climbing places are evident through the three dimensions of climbing. The physical site dimension established the base upon which the place meanings were held. It was through the use of the physical dimensions that the interviewees were able to climb and interact with other climbers. The social dimension contributed a human element to the place meanings through the social interactions but also through the climbing culture's application of signs and symbols which were linked to experiences and the physical place (e.g., completing the Ironman Traverse is a notable accomplishment in a climber's repertoire).

Finally, the experiential dimension exemplified how the interviewees were navigating the physical and social climbing places as climbers and how they became knowledgeable and familiar with the climbing places. Climbing places are physical places which are repositories for social meanings and interactions that are applied, created, and reworked through the actions of climbing. Therefore climbing place meanings were often associated with elements of accessibility, site attributes, social interactions, and climbing related experiences that were defined by and dependent on climbing sites themselves.

Chapter Five builds on this understanding of place meaning and the importance of rock climbing places for research participants. It focuses on the respondents' perceptions of indoor climbing facilities. It specifically addresses Sub-Question Two: "What meanings are ascribed to indoor climbing sites?"

Chapter Five: Indoor Climbing Places

Introduction

Generally, rock climbers have a focused interest in climbing indoors in purpose-built facilities (Attarian, 1999; Klauser et al., 1999) and in some instances these facilities are the preferred climbing sites for participants (Robinson, 2008). To expand on the understanding and conceptualization of place meaning within rock climbing, Chapter Five will focus on place meanings relevant to the indoor climbing facility. This chapter will respond to the second research sub-question "What meanings are ascribed to indoor climbing sites?"

Results and Discussion

The discussion surrounding the second research question is based on the analysis of 21 transcripts of semi-structured interviews conducted with rock climbers residing in western Canada. During the preliminary analysis, the interviews were inductively coded which resulted in a database containing the interviewees' references to and about indoor climbing. This coding identified nine themes which were grouped into three indoor climbing dimensions: (1) physical site dimension, (2) experiential dimension, and (3) activity focused dimension (Figure 5.1).

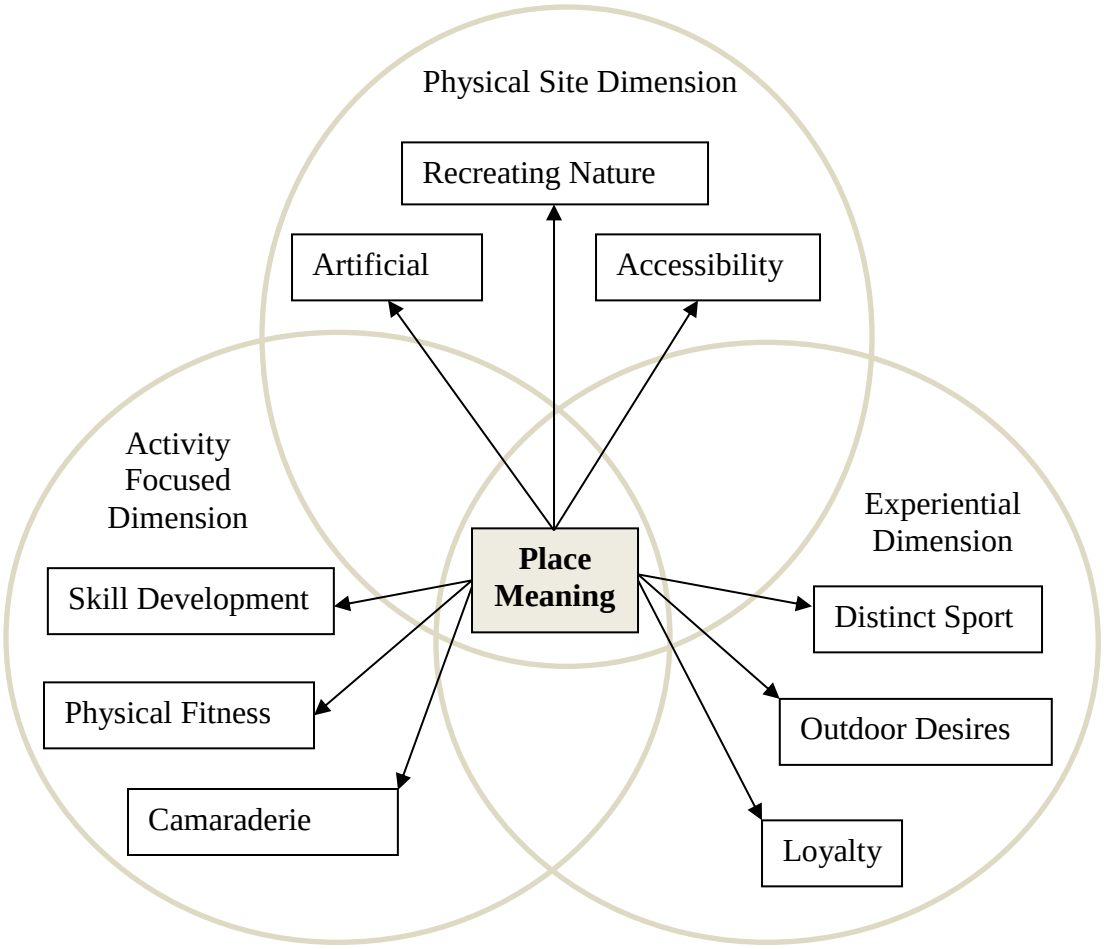


Figure 5.1. Indoor climbing dimensions and themes

Physical Site Dimension

Interviewees responded to questions regarding the physical layout of the climbing gym they frequented most often, their memorable indoor climbing experience, and what elements would comprise their ideal indoor climbing facility. Their responses provided substantial insight into the way climbers relate to indoor settings. The interviewees provided in-depth descriptions about the features that comprise their climbing gyms, how they used these features, and how this influenced their climbing experiences. Interviewees were keenly aware

of the physical components of their indoor climbing places and were able to describe them in great detail. Participant 10's comments exemplified the detail and depth of interviewee discussions on the physical dimensions of these climbing places:

> so you walk in . . . the front door . . . there's the kind of really interesting routes [as] you go down the sides they kind of . . . go in this H form, both the sides are vertical walls and the back there's . . . a slightly overhang[ing] wall and a really overhang[ing] wall. . . . [I]f you go into the bouldering area it comes up maybe two and a half feet off the ground the mats come off the ground that high there's a forty degree wall that is probably from the ground to the top maybe about thirty feet . . . kind of really overhanging nice pretty much flat and . . . then there's this bulge and it kind of goes under and there's . . . a little arch and there's another little maybe twenty degree wall coming out on the side and there's another wall on the other side here that varies in its degrees probably varying . . . from like flat . . . all the way down to . . . straight overhanging fifty degree kind of thing.

The physical setting of the climbing facility influenced the interviewees' perceptions of the facility and their experiences. For example, in describing a multiple activity facility, Participant 15 stated that:

> just everything that was going on in the Butter Dome but I think when . . . I climb . . . I'm really quite focused on what I'm doing so I don't get distracted easily by those . . . components but . . . you know it does lose its

sense of a climbing facility, just because it is quite smaller and other things going on.

While place meanings are different for different users, the physical site dimension of the indoor climbing facilities contributed to place meanings for the interviewees where the place was not only for participation in the activity of climbing but also influential on the act of climbing, climber interactions, and use of the facility. Key themes related to the physical components of indoor climbing places included artificial, recreating nature and accessibility.

Artificial.

The artificial theme represents the interviewees' open acknowledgement that indoor climbing facilities were a simulated environment. Recreation of "natural" outdoor characteristics was not required as long as some basic requirements were met, for example, adequate lighting, air flow, and textured walls. Participant 14 suggested that function should prevail over form or aesthetics. One feature that interviewees often identified with natural climbing areas and good gyms was the height of the climbing walls and openness of the space. Participant 9 explained that the importance of height was linked to a climbing gym's identity and was a source of pride. For Participant 15, the gym required several elements beyond the routes: "Lots of space, good energy, good music, clean . . . potentially neat different angles . . . [Interviewers comment removed] . . . lot[s] of different holds . . . not constant but a consistent rotation of route setting and . . . change over [of] holds." The desire for new indoor climbs is

also noted by Beard (2011) who reports that route rotation should be based on user numbers and can encourage repeat climbing gym patronage. Some climbers viewed the climbing gym as a space for climbable art, various holds, routes, and features, and objects could be added to provide unique and varied experiences. For example, Participant 17 commented,

> I would want bouldering as well, and a nice selection of bouldering again. So maybe a cave, is pretty fun. . . . I really like hanging features so like another gym in the UK I used to go to that was just for bouldering. And they had dumpsters . . . that they'd put whatever coating on to make them into climbing features. [Interviewers comment removed] And they were just suspended from the ceiling so you could climb underneath them and you could bridge from them to the actual wall and that was really cool.

Climbing gyms can acquire an identity based on creating challenging, enjoyable, and unique routes and problems. Participant 19 explained a form of progressive route setting: "their route setting was sort of [like] 'Okay, well we can put rocks on the wall, and that's great.' And they would do a lot of that but they would kind of try to bring a found element[13] into the route setting." At times the route setters at climbing gyms would create unique routes and problems for climbers during a competition. This was seen to be a sign of a progressive gym within the climbing community, something to which the interviewees were keen to associate themselves with. Participant 19 suggested that indoor climbing is responsible for pushing the limits of rock climbing. He explained that some route setters were

[13] Participant 19 discussed the route setters at a climbing gym brought objects not typically used as climbing holds into their tool box from which to make routes (e.g., steering wheel, stairway railing).

adding “really abstract kind of pieces . . . and that’s what you can do with indoor climbing that I just don’t see in [outdoor] rock climbing and that’s one thing that keeps me, excited about indoor climbing.” To clarify, within outdoor climbing, climbers and route designers are limited to naturally occurring rock holds (i.e., holds cannot be created), whereas in indoor facilities the route setters are able to incorporate various items as holds. Eden and Barratt (2010) also explained that indoor climbing had a strong influence on the sport of climbing through changes in climbing skill, accessibility, and perceptions of climber safety. Interviewees praised climbing gyms that offered variety and changing routes or problems, something that is not found on natural rock climbs. Similarly, Beard (2011) explains that climbers searched for new routes to climb outdoors and were intrigued by constantly varying routes and wall features inside climbing facilities. While the interviewees identified varying preferences for various route choices, Schöffl and Kuepper (2006) note that challenging and unique routes were desired by rock climbing competition spectators and the media. Study findings are consistent with the views expressed in the literature that indicate that challenging, varying, and unique routes are desirable attributes for indoor climbing facilities.

Furthermore, the participants discussed the typically dark confines of the climbing gym and how the bright tape used to indicate the climbing routes added a layer of colour, uniqueness, and contrast to the gym. Participant 2 described such practices as routes “marked in brightly covered tape and the holds ” that are spaced out to enhance variety. Brighter climbing spaces, whether created through natural or artificial lighting, were seen as desired features by many participants.

While some interviewees identified the unique smell of the climbing gym with a negative perspective of "smelling like feet" or "smelled awful," others commented on how the dust, variable indoor temperatures, and smells comprised the essence of the climbing gym. For Participant 14 the odour was described as, "Yeah smells like the climbing wall." Similarly, Participant 2 found comfort in the familiar smells of the climbing gym:

> I love the smell of [this climbing gym]. Cause it's the same smell, it's funny you say smell cause that's the first thing I walk in and the first thing I open the door and the bell goes off and then I look to see how many shoes are there . . . the smell is always the same. It's really like that kind of musky chalky smell but it's like a weird I don't even know what it smells. . . . It's just [this climbing gym]. It's smelled the same since I . . . went there for my birthday when I was 8 then when I was 12 [un]till I'm 22 [now]. It's always smelled the same.

The indoor climbing facility with its various styles and designs with a multitude of uses became a place full of meanings for the interviewees. The climbing facility with its artificial climbing routes/problems engaged the interviewees' senses. Their senses, specifically sight and smell, helped them to establish place meaning associated with their indoor climbing facilities. This is consistent with Gaffney and Bale (2004) and Low and Altman (1992) who suggest that senses influence perceptions of place. Participant 11 compared the indoor bouldering gym to another constructed recreation place:

> It was like . . . [a] street skating environment if you're a skateboarder. It was like a big skate park for climbers . . . [Interviewer prompt removed] . . . that sort of thing that's what it was. And you can just play, and play endlessly and . . . good lighting, good music but a place that's would be just dedicated to bouldering would make me happy.

Participant 11 liked the flexibility of indoor climbing facilities, as they can be constructed to better meet the needs and desires of the climbers. While the built climbing facilities are not exact replicas of outdoor climbing places, they can provide a simulated recreation place while minimizing environmental impacts associated with the activity (Salome, van Bottenburg, & van den Heuvel, 2012).

Under the artificial theme, the interviewees saw indoor climbing facilities as a place with meanings infused by the physical and sensory features that comprised the place. The interviewees' perceptions of the building, routes, sights, smells, and sounds informed their place meanings. While the interview participants were open to the artificial setting and structure of the indoor climbing gym, they were also appreciative of and had desires for the replication of various natural elements and settings.

Recreating nature.

Many interviewees expressed a desire to have selected characteristics of the natural environment included inside indoor climbing facilities to create a desired setting and or experience. Therefore the recreating nature theme captures the interviewees' interest in incorporating natural and or simulated elements into indoor climbing.

Interviewees most frequently mentioned enjoying or wanting natural sunlight within the climbing area and did not like the "older style" of climbing gym which was typically dimly lit. Participants were aware of the gym's light source, for example, Participant 17 stated, "And it was quite light because the roof was fiberglass in areas." The importance of natural light was highlighted when some climbers mentioned the light would come "streaming in" and this influenced the interviewees' enjoyment while they were climbing. Interviewees appreciated the climate controlled environment where temperature and ventilation were regulated for optimal enjoyment.

Interviewees had a heightened awareness of the textures, shapes, and features of the climbing routes/problems and walls. The participants' preferred climbing surfaces that were enhanced by feature variations. Participant 9 delved into the importance of texture on the built climbing wall,

> I mean the more texture, the more clumpiness, the better. . . . I mean, plywood walls with holds up that is fine, if that's what you have but it doesn't really mimic the real rocks. So, it can't . . . test you but textured walls can test you in better ways so the more variety in terms of the texture and features the better.

The texture of the climbing wall was frequently mentioned by the interviewees and often led to discussions about mimicking natural features. Participant 14 explained that he thought more natural looking features would encourage novice climbers, but "To keep the interest of people . . . that would come regularly . . . [the gym] could be something which doesn't have look as natural." However, he

continued to indicate that the physical characteristics of the climbing place "could have different . . . mountain . . . or outdoor features" to improve opportunities for teaching and learning. His comments suggest that indoor climbing facilities are useful for training and that features which replicate natural characteristics could ultimately enhance the indoor climbing experience. Furthermore, Participant 14 and others appreciated,

> Some natural looking features. . . . [T]here are some really cool new . . . climb gyms that have . . . great moulded features . . . like . . . cracks and . . . [Interviewers comment removed] . . . different things that really represent mountain areas or different types of rock. . . . [A]nd so, what I would like is if you are in a local area . . . as much as possible like if you are in Winnipeg obviously there aren't mountains close by to model it after . . . but here in BC, there are specific types of rock . . . and I would like to see it kind of mirror that.

Other interviewees preferred details that mimicked the natural contours of the rocks, as Participant 3 explained,

> most of the time from what I have seen . . . climbing the walls are either straight or they have . . . 90 degree curves and stuff whereas here [at the gym in Saskatchewan] it was kind of . . . more like actually climbing outside where you get like the actual curve of it rather than like the 90 degree angled thing that you rarely see in real rock.

Participant 8 also compared the angles and characteristics of the gym wall with natural rock cliffs:

> the terrain is constantly changing . . . so not talking about route setting but the angles . . . the angles of the climbing walls themselves. If you remember when we looked upstairs there's a lot of sharp changes and angles, routes and corners and stuff which feels very similar to outside climbing.

Some climbing gyms described by the interviewees contained added features that replicated the natural settings more completely (e.g., top out boulders[14] and caves). For example, Participant 3 stated:

> I liked the fact . . . that . . . it reminded you of a cave when you were in there... [Interviewer prompt removed] . . . so although you were inside it seemed like it was trying to make it natural. . . . [Interviewer prompt removed] But . . . they still have the bright coloured tape and everything so obviously it's not, but it . . . look[ed] like they were trying to imitate that so that was really cool and it just puts you into the vibe.

The recreation of natural features in built climbing gyms presented the climbers with experiences that are analogous to hyperreality. In hyperreality the artificial or replicated environment becomes a viable replacement or reproduction of the original (Urry, 2008). Not all interviewees seemed to welcome the transition to the hyperreal. However, some interviewees appreciated it, for example, recreating specific outdoor routes and holds, mimicking natural contours, and using neutral paint colours and textures.

[14] A climbing boulder where the climber will climb on top of the boulder to finish the route/problem.

While the interviewees openly chose to climb indoors, they identified specific elements that indoor facilities contained or could contain that would permit their indoor climbing experience to better mimic the outdoor experience. Recreating natural or organic features helped to enhance indoor climbing. This preference for natural and organic features is reflected in the perceptions of entrepreneurs who construct artificial sport settings which are modeled after traditional sportscapes (Salome et al., 2012). Furthermore, Tivers (1997) explains that artificial ski slopes can be developed to create an authentic skiing experience that varies between various skiing centres. Similarly, there is potential for indoor climbing facilities to create unique elements and settings so that built facilities differ from each other and do not become placeless as described by Bale and Vertinsky (2004).

Accessibility.

Interviewees mentioned that proximity to home, school, and work, therefore, convenience influenced their patronage of climbing gyms. Convenient access to climbing gyms was mentioned as the main reason why participants climbed at a specific gym. For example Participant 18 commented, "It's really close to my house. It's like a 5-minute bike ride" and later she added "It's close, that's my favourite part." Convenient access was also noted by Eden and Barratt (2010) and van Bottenburg and Salome (2010) to be the reason why climbers chose to climb indoors. Similarly, participants discussed that the close proximity to climbing gyms from work facilitated the ability to go climbing at the end of the work day. Participant 11 explained "why do I go there? It's because it's about 10

minutes away from where I work . . . as opposed to the other gyms that are a lot further." Previous research has identified that recreational opportunities in close proximity to home encourage repeat visitations. Some participants worked at the gym and also climbed there because of the convenience afforded by that arrangement.

The indoor climbing gym was also identified as an influence on climbing identity. For example Participant 18 explained, "Simply based on where I live, because [there is] no climbing to really mention within four hours of Edmonton. I've done lots of outdoor bouldering, but I would say I've . . . always defined myself as an indoor climber." Participant 18 used the indoor climbing place to establish her identity as a climber. Similarly, interviewees commented on how the climbing community was influenced by climbing places. Edmonton interviewees indicated that many climbers within the city were probably boulderers if they primarily climbed indoors because there is a lack of outdoor climbing places in close proximity.

Climbing facilities used by participants, were typically accessed based on convenience. Within the confines of the time allocated for climbing or leisure, interviewees searched for easily accessible climbing sites. Climbing facilities in close proximity to the interviewees enabled them to climb when they were not near to outdoor crags (Eden & Barratt, 2010).

The physical site dimension explored the physical dimensions of the indoor climbing facility. While the artificial and recreating nature themes potentially could have been grouped under one theme such as site characteristics

they were labeled individually to signify the difference between the two themes. The artificial theme highlighted those features of indoor facilities that that were functional, but also acquired meaning through the interviewees' senses and use. Interviewees indicated that the indoor facility was an appropriate place to climb, but the addition of features that mimicked the natural setting was preferred. These views comprised the recreating nature theme. The interviewees' choice of where to climb was influenced by the facility's proximity which emerged as the third theme under the physical site dimension: accessibility. Furthermore, the interviewees' identity became linked to the indoor facility when the outdoor climbing places were not easily accessible.

Experiential Dimension

This dimension focused on the interviewees' experience. Responses suggest that certain outcomes and desires are associated with indoor climbing. The climbing facility provided the climbing experience and facilitated the sport of climbing. Themes included: distinct sport, outdoor desires, and loyalty.

Distinct sport.

A majority of participants indicated that while the activities share some similarities, indoor and outdoor climbing are different. For some the distinction was quite simple, Participant 1 explained "Just climbing outdoors in general. . . . [I]t's just more fun." Participant 12 described the two activities as "just two different animals." This section examines the elements that the interviewees used to explain how the indoor and outdoor climbing places are different.

For interviewees, there were differences in the skills required for climbing indoors versus outdoors "I . . . find there's no real risk management or, other rope skills that you learn, outside you don't really learn those in the gym" (Participant 13). The route/problem grade and ability difference of climbers was explained by Participant 16: "I'm like at a V8 – V9 bouldering level . . . [Interviewers comment removed] . . . but that's indoor, so outdoor is totally different." Participant 14 hypothesized that the possible differences in activities was related to route design:

> I enjoy working different problems with a friend and climbing indoors . . . is much more predictable in the sense of holds in some ways . . . so some things can be . . . even more sequenced . . . [Interviewer comment removed] . . . than outdoors. Outdoors often you might be able to find the difference sequence[15] but indoors sometimes there's . . . only one way to do it . . . .

This skill and ability difference was similarly noticed by golfers who switched between using a virtual golf simulator versus golfing on a traditional golf course (Forrester & Beggs, 2001) as well as in previous research on indoor versus outdoor climbing (Eden & Barratt, 2010). It appears that while the simulated environment provides some similarities to the outdoor experience, not all skills and ability levels transfer seamlessly between the indoor and outdoor settings (e.g., rope management on longer climbs). The route was also the focus for Participant 8 who noted that the major difference between indoor and outdoor climbing was the changing indoor routes and the typically static outdoor routes:

[15] Typically the route setter will indicate specific holds a climber is supposed to use to complete an indoor problem/ route; therefore a sequence is created by the route setter. Outdoor routes/problems are not usually bound by such specific hold designations.

> if you start something [outdoors] and you feel that . . . you have the potential to finish it, but you have to leave it behind . . . there's your motivation to return. So . . . I mean you're going to get that at the gym as well right. There's always something set above your level that you know that you can come back for but in the gym there's always that pressure that it's going to get changed or reset so you gotta come back sooner.

Beard (2011) states that the changing routes and features within a climbing facility are interesting to climbers, however, because indoor climbing routes change, Participant 19 concluded that "there is no constant, there is no accomplishment in indoor climbing, it's only today. Because tomorrow that boulder problem is taken down." Participant 5 furthered the comparison of accomplishment which,

> in an outdoor session it always seems more . . . like 'Okay this is where more of the real climbing starts'. . . [Interviewer comments removed] . . . 'We're on real rock now' it's not that this is getting serious but this is rock climbing. As opposed to being indoors and pulling on plastic. . . . [E]ven if I climb let's say for the very first time . . . like I climb 5.12a indoors that's not an accomplishment until I repeat it outdoors. [Interviewer comments removed]. So . . . it's great I'll be happy because I know that I'll be able to do that outdoors, but that's why it makes me happy . . . because now I have to replicate that outdoors.

Therefore, one noted difference was the skill involved in climbing outdoors versus climbing indoors. Furthermore, the skill level—which includes climbing

ability (i.e., route grades) and route finding of climbers—is measured and often validated by outdoor accomplishment because the indoor routes are changed through the manipulation of features and artificial holds. Similarly some participants perceived a predictable transition from indoor climbing through to outdoor climbing. For example, Participant 21 explained, "I started indoors and . . . after going outdoors I realized I liked that a lot better." Furthermore, Participant 3 highlighted the negative stigma surrounding only climbing indoors when she recalled a discussion with her sister about transitioning to the outdoor climbing. She explained, her sister "want[ed] to get me out on the real rock. . . [be]cause she's like 'I love that you're into climbing but it's ridiculous that you have never done it outside'; I'm like 'I agree'. So . . . she brought me out to . . . [Lake Louise] . . .". As an exception, Participant 17's first climbing experience occurred outside and resulted in a lengthy climbing lifestyle. She explained,

> I signed up for an outdoors club trip to Nordegg to go climbing and then I got there and it turned out that I . . . had a natural aptitude for it and . . . I really enjoy it. And all the guys were like please start climbing when you go back to Edmonton, go to the gym and start climbing and so I did.

Through considering the experiences reported by some interviewees and previous research (e.g., Attrarian, 1999; Morgan, 1998), it appears that climbers do transition from indoor climbing to outdoor climbing.

Route markers (i.e., coloured tape) were also identified by the interviewees as a noticeable difference between the indoor and outdoor settings. For example, Participant 5 pointed this out as "the great contrast between indoor

and outdoor climbing. . . . [Y]our first time out there you're totally just like '[O]'kay why aren't these handholds taped? Like . . . where do I put my hands and stuff?'" Indoors, coloured tape is used to distinguish specific routes and problems within the plethora of holds on the indoor climbing wall. The tape signifies the difficulty, the sequence of the climbing movements, and the holds to be used by the climbers. Route finding skills are therefore less important indoors because,

> bouldering outdoors is way harder . . . [I]t's a lot harder to figure out what you are supposed to do. I mean, when you're indoors, you have, whatever, ten holds on the problem and they all have a piece of yellow tape on them and . . . the only thing that you are not sure about is the sequence of which hold you are supposed to use when. (Participant 18)

The absence of tape to mark holds in outdoor settings permits individual climbing variations because climbers are free to choose which features are appropriate holds. Participant 18 postulated,

> But when you are outdoors, you sort of know where you start and you know where you finish. And in between, is totally open. And so . . . I think . . . it's way more interesting outdoors . . . indoors is sort of limited because you only have those ten holds on the problem and if you are too short to reach a certain move and then you can't do the problem. Unless you then maybe add an extra hold then maybe that's cheating or whatever. But if you're outdoors, maybe you'll have a problem where most people would do a big move from one little hold to another, and . . . if you are

> shorter you will find some little intermediate [hold] that nobody would probably even look at, but it's just a little nook in the rock or whatever. So, I think . . . it's a bit more . . . creative and flexible outside. [Interviewer comments removed]. Rather than it is in the inside.

Participant 18's comment also highlighted the issue of ethics and cheating within rock climbing. In indoor climbing facilities, climbers are expected to climb using specifically designated holds and if a climber completes the route or problem by using other holds or holds out of sequence they are considered a "cheater" or the attempt of that route or problem is judged to be unsuccessful. Similarly outdoors, the majority of climbers consider cheating to include manufacturing holds in the rock (Ramsey, 2010) or using other aids to create temporary holds (e.g., grabbing a carabineer or bolt).

The difference between marked and unmarked routes was further illustrated by Participant 5 and others' complaints about indoor holds, routes, and problems not being taped completely:

> I have a big problem with . . . when I first started climbing here I was like 'Okay you guys on your highwall routes you're missing tape on a whole metre long section up high'.

The interviewees do not appreciate when the routes and problems in indoor facilities are not sufficiently identified; however they support unmarked routes in the outdoors. Similar differences were noted by Boyd and Munroe (2003) who postulate that the need for route finding abilities is minimized by the tape identifying indoor routes. Interviewees might be favourable to taped

routes/problems as a result of manufactured walls containing hold placement that is sporadic and might not include an obvious line until the route/problem is taped to provide participants with some guidance as to the route's direction. Conversely, outdoor routes tend to follow specific features in the rock and the interviewees were open to identifying the routes themselves. For the most part interviewees did not comment on the influence of chalk marking the outdoor holds and how that altered their experiences. However, Participant 5 did appreciate climbing on sandstone where the chalk was not noticeably marking the holds. He also identified that guide books for indoor climbing gyms have a specific function:

> a lot of gyms [will] . . . once a route setter has set a route they write it down in a book . . . it's all shaded with tape and people go around . . . and 'Go there are five un-taped holds up there you should do something about that.'

Most interviewees did not focus on the indoor guide books although Participant 5 found them useful. However, Hamilton (1979) and Hanley et al. (2002) suggest that rock climbing guidebooks are a window into the climbing culture. Conversely, Heywood (1994) and Kiewa (2002) suggest that the guide book is a negative aspect of climbing because it alters the experience through commercialization of the sport and outlining the climb itself.

While interviewees appeared to appreciate the "openness" of outdoor climbing routes and problems, they were less appreciative of the "scripted" indoor climbs. They focused attention on route setting, route setters, and route/problem

styles which influenced their indoor climbing experience. For example, after the interview, Participant 5 made some comments that indicated place dependence. He suggested that he does not climb at a local climbing gym because that would require him to learn another gym's problem rating system, route style, and social structure. He also commented that staff at that particular gym were too young and he felt that the problems they created were not realistic representations of routes that he would encounter in the natural environment because the routes typically put a climber in odd body positions and had awkward hand placements.

Participants commented that their ideal climbing gym would mimic the natural rock cliffs, especially in terms of height. In general, interviewees felt that extended vertical climbs were one important area that most gyms could improve upon. For example, Participant 12 explained,

> They are so small. And they are not that tall. And other . . . [gyms] especially with [the climbing gym], the distance between the bolts they're so short that . . . I can't fully agree with them just because . . . you can't do everything inside that gym. . . . But . . . it would be nice if there was a lot taller [space to climb].

The indoor climbing gym is a place of social interactions and a space designed for climbing experiences. At times it is viewed as an open space full of potential and conversely the indoor climbing gym can be simultaneously confining. Participant 4 compared her favourite outdoor place to where she climbed most often indoors,

> [the climbing gym] is very busy, well I guess Squamish is really busy too but it's just nice being outside, being in the forest, people are more spread out . . . [Interviewer comments removed]. . . . [A] lot of the distractions aren't there I guess, you don't have school groups and birthday parties and 5 year olds running around screaming all of the time but, I think that the things I like about Squamish are still at [the climbing gym], I like the community and I like the people hanging around on the ground and you can find that at [the climbing gym]

Through continuous use and climber interactions, the climbing gym became a meeting area, a lounging area, and a place to climb and watch climbers. Participant 12 described the difference,

> The gym has a higher social aspect to it just because it's a lot easier for people but when you start going into your groups then depending on where you'd go, the group is going to be just as social anywhere else you go, but bouldering is probably going to be the next on the list just because everybody can sit around and climb . . . [Interviewer comments removed] . . . whereas . . . sport climbing especially if you are doing multi-pitched. There's only two of you on the route, so it's kind of you and your buddy and that's about it. . . . . Yeah the amount of people that you climb with at that one time in one spot goes down as you go up to lead climbing and trad and stuff like that.

The issues surrounding social interactions, crowding, and displacement occurred whether the participants were climbing indoors or outdoors; it was the

interviewees' responses to crowding and displacement that varied. In climbing facilities, the interviewees reported some acceptance of crowding. They also recognized strategies to minimize the impact of crowding such as climbing at different times of day or moving to a different location/route within the facility. Conversely, at outdoor settings the interviewees were typically displaced by issues of crowding at the crags. Crowding was previously noted to have less impact on place dependence (Budruk et al., 2008) because it is possible the interviewees' perception towards the functionality of the climbing facilities enabled them to be less affected by issues of crowding.

The characteristics of the climbing sites also gained the attention of the climbers. Interviewees noted that specific natural elements are not contained within indoor facilities. Of note were no natural smells (e.g., trees), puddles in the pockets of rock, scenery, elements (sun, wind, rain), and textures of different rock types. For example, Participant 18 described how she experienced textures,

> The rock is sharp. I'd never really climbed, I never boulder that much outdoors before I was there and I didn't realize . . . it's so sharp there that your tips start bleeding after a few days. Like you have to take a day off because your fingers are rubbed raw.

Climbers reported a need to engage and respond to the natural environment in outdoor settings whereas in indoor settings the environment became a place to focus on specific aspects of climbing. Participant 9 described the interviewees' relationship with both the indoor and outdoor settings:

> So, you want an environment that's fairly safe. That of course you can't control as much . . . in the outdoor settings, so it's an advantage of indoor climbing places I guess that you can really really control that space and with mats and stuff like that and but of course, when you go outdoors, you carry small mats on your back, and so . . . spotting becomes a bigger deal in the outdoors rather than so much in indoors and I think it's simply because of the amount of mats and . . . when you are outside there is unevenness of the ground there are other little boulders, there are other little stuff that you treat differently.

When natural elements were removed from indoor climbing these elements potentially changed the activity of rock climbing (see outdoor desires theme for a discussion about the influence of seasonality). Participants found they reacted and responded differently to the characteristics of the different settings. Similarly, some of the interviewees discussed how their attachment to climbing places was influenced by the disparity between indoor and outdoor climbing sites. For example Participant 19 explained:

> you do get those kind of connections to a place with the people better out in mountains, the rocks. They'll go out there, it's where they go after work and they'll get snooty of strangers [who] show up during their time . . . maybe, some . . . place[s] . . . are better than others. But . . . I think. Indoor climbing is more open and acceptable [cellular phone ringing] simply because it's harder to gain ownership of that place . . . [Interviewer comments removed] . . . than the outside. Although no one will ever own

> that outside and someone . . . theoretically could . . . more easily own the climbing facility. Say 'I own it' but it's just different.

Similarly, Participant 2 stated:

> I think because it's in a gym and because it's structured and because . . . they make it really easy for participation . . . I don't have that same sense of pride . . . and don't have that same sense, of . . . accomplishment and that this is my place. I don't really have an ownership to it I guess. . . . [Y]ou know everyone goes to [this climbing gym] . . . it's the place to go.

Participant 19 commented on the process which establishes a connection to climbing places:

> People . . . will have a deeper sense of ownership or a connection to a place or a more profound connection to a place if it's outside and they've put time into move rocks, clean moss off and everything whereas here [at the gym], everyone is a visitor in a way.

The comments by Participants 2 and 19 are interesting because from their perspectives, climbing is a social activity during which individuals interact as part of the activity. However, climbers sometimes demonstrate a level of ownership over climbing areas through group behaviour that exemplifies their possession of a climbing place (de Léséleuc et al., 2002). Furthermore, the climbing community identifies ownership or access rights and acknowledges the people who establish outdoor routes for the enjoyment and engagement of other climbers (Halbert, 2010). Often within climbing facilities, the setter of the route or

problem is identified in a similar show of respect. In fact, they are sometimes regarded as an artist providing the name, rights, and a signature to their creations.

The participants explained that their experience climbing indoors is quite different from their experience climbing outdoors based on how they perceive the physical setting and how they alter their behaviours as a result. Indoor climbing had a strong influence on the participants' experience and their narratives contained elements of place identity, place dependence, and place attachment associated with their activities in these facilities. While Mittelstaedt (1997) explains that the physical elements of climbing indoors and outdoors are similar, the interviewees recognized that the physical characteristics were indeed different. There were similarities between how the interviewees approached the sport of climbing and how they approached climbing behaviours indoors and outdoors, however, indoor climbing was described in different terms than outdoor climbing.

Outdoor desires.

The desire to climb outdoors was identified as a theme because interviewees emphasized the functionality of climbing indoors, but also indicated a desire to climb outdoors. For example, Participant 1 explained she climbed most often "indoors. I wish I did more outdoors." Participant 17 captured the general sentiment of the other interviewees with the comment, "I used to just go and climb for fun. And I find that I get a bit restless when I can only indoor climb. There's a certain point where, I've climbed everything there that there is to climb." Like many of the other interviewees, Participant 17 preferred to climb in a natural setting.

Climbing gym manager, Participant 19, offered a different perspective proclaiming that,

> Indoor climbing is the engine of the industry. People don't get into climbing to go ice climbing. Sure . . . there's one percent of people who do. I don't, I couldn't give you an accurate percentage but people go, people experience this sport for the first time in an indoor climbing facility.

Similar to Participant 19, Participant 21 saw that the indoor climbing gym as a possible transition place to outdoor climbing: "I started indoors and . . . after going outdoors I realized I liked that a lot better." Participant 13 also highlighted the connection between learning indoors, transitioning to outdoor climbing and teaching other people to climb: "that's what got me sort of hooked onto it was the teaching I got through at the gym and then obviously I want to take that outside." Even though the indoor climbing facilities can technically offer similar climbing features, as discussed under the activity focused dimension, the interviewees clearly indicated a preference for climbing outdoors. The transition from indoor climbing to outdoor climbing appears to be a significant evolution in interviewees climbing careers; with the ultimate goal to climb outdoors. For example, Participant 16 stated "I do both bouldering and . . . sport climbing . . . [Interviewer comments removed] . . . but only I haven't bouldered outside yet." While Participant 17 explained "I really enjoy, the Foundry compared to other climbing gyms I guess, but I'd still rather be outside." The climbers, especially Participants 16 and 17 demonstrated place dependence for indoor climbing gyms similar to

that of Participant 7 who stated "I wouldn't normally be . . . an indoor climbing person but you know we're in Edmonton there's no rocks right. So you frigging bouldering here [in the gym], right."

The desire to climb outdoors was highlighted by some interviewees for the simple and pure enjoyment that they found there. Participant 1 commented, "Just climbing outdoors in general. I . . . it's just more fun." While Participant 2 explained,

> I still think I would like more of an opportunity to go even out to Jasper or Banff . . . to do more outside because inside its fun but . . . it's not climbing it's not bouldering you're on a wall.

Seasonality was a major determinant of the indoor climbing motivation. For example, Participant 14 explained that indoor facilities enabled him to keep climbing through the winter,

> Just because it was winter here and I couldn't get as much . . . climbing. The weather was poor. . . . . So, I was just trying to get climbing strength a little bit, and I enjoy the social aspect of it, being with people that you know and seeing people again. . . . . I don't enjoy the super short . . . roped routes. I don't like . . . artificial lighting.

Seasonality influenced the frequency and duration of the interviewees' patronage to the climbing gyms but for Participant 18, it also influenced the purchase of a gym membership,

> Yeah, that's sort of almost like where I'm at in Vancouver . . . my pass expired a couple months ago and . . . I am pretty motivated to renew it.

> But we'll see, maybe when the fall comes and I can't go outside anymore I [will] want to.

While seasonality influenced gym climbing it also provided an incentive to take vacations to warmer climbing sites which encouraged increased attendance at indoor climbing facilities to train:

> I'll go to climb routes, I'll go to climb high-wall routes or I'll go to climb bouldering, and . . . it depends on the time of the year. If I'm ramping up . . . for an outdoor climbing trip . . . then I'll be climbing more routes, and I usually do that for month and . . . then I'll throw in real quick 2 weeks . . . of bouldering just to build power. You can build endurance on a the high wall, on the high-wall routes but it's the boulder that gives you . . . the power just because of the hard, quick, crux moves typically. (Participant 9)

In a similar vein other interviewees indicated that the season also determined how they use the gym for training and enjoyment. Some climbers noticed that their frequency of use and climbing style changed over the fall, winter, spring, and summer seasons. For example Participant 5's spring training in March and April was influenced by the desire to start preparing for outdoor route climbing:

> indoor it depends what season we're in like, come . . . March/April I'll be full on route climbing, like right now I'm in the gym three times a week . . . [Interviewer comments removed]. If all three of those session[s] aren't bouldering at least two of them are right now [in December].

Similar to seasonality, was the local climate and weather; cold weather and rainy days were often cited as reasons interviewees would choose to climb indoors over climbing outdoors. Mittelstaedt (1997) explains that the benefit of indoor climbing is that it reduces weather and seasonality as a constraint to rock climbing. The ability to climb indoors away from inconveniences such as limited daylight, inclement weather, and seasonality changes the way climbers view rock climbing (Eden & Barratt, 2010).

Indoor climbing facilities were described as places to climb and learn to climb which fostered and enabled the climbers desire to climb outdoors. While the indoor climbing places fulfilled the need to climb in all seasons, the majority of interviewees longed to climb at outdoor places.

Loyalty.

Interviewees indicated a sense of loyalty and ownership of climbing gyms through comments such as "ours," "we have," and "home gym." Others indicated that they had preferred climbing places. For example Participant 1 commented "I've only been climbing in two gyms so you get pretty loyal to those." Participant 12 expressed his loyalty by stating "We always go to [this climbing gym]." In Participant 16's words "climbing serves as my stress relief at the end of the day, right now the climbing gym is closed and I have final exams," but his loyalty was so strong for his specific climbing gym that he would not consider to going to another: "I wish I could go . . . [have a climbing session] . . . . [But] . . . I don't like the other gyms in the Edmonton." While Motl, Berger and Leuschen (2000) conclude that "rock climbers reported greater mood benefits than did the

health education students" (p. 354) they do not consider if place loyalty was influenced or an influencer of the mood benefits. Furthermore, stress reduction is also found to occur from relaxation in a simulated natural environment (Kjellgren & Buhrkall, 2010). Therefore, indoor climbers may gain mood enhancing and stress reduction benefits from climbing indoors which might be enhanced through gym loyalties.

The interviewees provided some explanations for their loyalty. Some interviewees focused their loyalty on the basis of the status of the gym as exemplified by Participant 16's explanation of the gym's identity,

> it's the most fantastic gym there is. [Interviewer comments removed]. I mean, it's definitely I think the best climbing gym there is . . . in Edmonton. . . . [J]ust because . . . it's got 60 . . . foot walls, there that you can climb on so, it's . . . superb training for endurance . . . . It's a good simulator for that outdoor climbing.

Other participants based their loyalty on perceptions or feelings of familiarity. For example, Participant 21 explained his loyalty: "I think because it's familiar, I feel sort of more at home." Participant 17 stated that loyalty is place specific when she explained, "there's a certain, a gym loyalty. If I'm talking about gyms . . . in Edmonton I'll say that I climb at the [specific climbing gym] rather than at [the other climbing gym]." Participant 17 elaborated that gym loyalty was, "Because that's my place where I feel comfortable." It is possible that repeated use led to familiarity which resulted in the interviewees experiencing place dependence and place attachment. For example, Participant 3 stated, "Because . .

. the [specific climbing gym] is super accessible and easy and that's . . . where I have been introduced to climbing. So that's . . . what I am familiar with." She exhibited place dependence for the [specific climbing gym] because that was where she was introduced to rock climbing. The repeated use influenced her place attachment by increasing her familiarity with her climbing place. Similarly, Participant 19 demonstrated ownership and place attachment:

> So definitely people do get attached [to] indoor climbing facilities. And I think I'm probably one of the most rabid people that would get attached to a climbing facility. So, what particular connects me to that climbing garage? One I made it. Two, it's . . . kind of a, a family thing you know. . . . And, it's just my secret it's my bat cave.

Research by Eisenhauer and colleagues (2000) found that the most important reason for the formation of place attachment was a "family/friend related reason" followed by "environmental features/characteristics of place" and "convenience/ownership." Under the gym loyalty theme, the interviewees indicated why specific climbing gyms received their loyal patronages. These explanations were consistent with the conclusions provided by Eisenhauer and colleagues. Furthermore, research has suggested that once people have an attachment to a place they are more likely to have a vested interest in that place's management and use (Smaldone et al., 2005). This claim was demonstrated by this study's participants through their gym loyalty but also their interest in the design, layout, and operation of the climbing facilities as discussed in the physical site dimension.

The experiential dimension encompassed the themes related to: distinct sport, outdoor desires, and loyalty. While the indoor and outdoor settings had their differences, interviewees described similar attributes for both settings. The meanings they applied to the indoor places distinguished the indoor places from the outdoor places. Therefore, it is important to consider how the interviewees were using the indoor climbing facilities.

Activity Focused Dimension

The interviewees discussed how they used the indoor climbing facilities to acquire desired outcomes. These discussions suggested that climbing gyms became places that had specific and overlapping purposes where the interviewees created experiences based on the activity of climbing and their interactions with other climbers. Specifically the climbing gym became a place for skill development, improving physical fitness, and a place for camaraderie with the climbing community.

Skill development.

The interviewees often discussed how they viewed the indoor climbing facilities as places for training and developing useful climbing related skills. Interviewees would socialize and participate in different activities (e.g., play climbing games) to work on technique and agility for indoor and outdoor rock climbing. For example, Participant 11 stated that,

> When I'm indoors, it's very focused on technique and really . . . pushing the envelope . . . like pushing my safety boundaries sort of thing and . . .

> really pushing, ‘Okay . . . how high can I reach, how small can [I] grab onto . . . how fluid can I move through that’.

Participant 12 highlighted that varied and large spaces were required for training purposes,

> I like routes where . . . especially for warm-ups they’re nice routes that start at maybe a 5.8 . . . [Interviewer’s comment removed] . . . and finishes back for the 5.10 but they’re just stupid long. Like the one route at the gym . . . it’s called . . . the BLT and . . . it does the entire outside perimeter of the gym it goes up the cave and that thing is awesome for training so if you had more routes like that, that just encompass that huge area to give us something to really work for.

Similarly Participant 11 added that the vertical space was also important, “I think. . . . [B]eing in Alberta . . . you are so close [to the] mountain[s], people like to go high and train for going high, so . . . the gyms are oriented for going high.” However other features that added to the functionality of the climbing areas were also desired, for example Participant 8 explained,

> something we’re missing here [at the gym] is top out boulders. . . . [O]ne of the spots where I always struggle the most when I’m outside is getting comfortable topping out . . . on a boulder. So something like that to train inside where it’s a little safer would . . . be great.

Apart from the physical space for climbing, interviewees were also specific about the importance of the routes and holds that were used for training.

Variety and purpose of the routes was important, for example, Participant 6 who was unappreciative of certain elements stated that,

> the [climbing gym] is [a] very functional place for me. I don't find it an overly inspiring climbing gym. It's very functional and I've gotten used to the problems that are set, the different styles. I actually find its height is pretty good for lead climbing and top roping. . . . So how does it compare [to climbing outdoors] . . . it's a place to climb.

On the other hand, Participant 19 explains his home gym experience as one where he was: "trying to do the most powerful moves that I can. I'm trying to do the hardest things I can." Furthermore, for Participant 19 the home gym was a place for practicing and developing his climbing skills:

> So this garage is interesting in that I am making new boulder problems but all those boulder problems are adding to that databank of moves, and of previous accomplishments. . . . So . . . most people change their walls up but after the first few years of changing it up, they realized, 'Actually I shouldn't change these because, I'll just add to it, keep layering it up to the point where you know, a few years where I can go back and climb 15, 20 years back into the past that sort of thing'.

Similarly, Participant 15 wanted the routes created for competitions left on the wall after the event was held because,

> it allows you . . . to work on certain routes and to work on different styles and movement patterns and if you can't do that it's like, a training series, a training adaptation that you're trying to get from these different routes . . .

> if they're taken down, you don't get to practice that or don't [get] muscle memory or those kind of things involved in maybe working a route progressing that skill.

Routes and problems were used to enhance the skills and abilities of the interviewees while testing their current climbing ability. Although the interviewees were not always focused on accomplishing measurable improvements, they were creating spontaneous problems and games as a way to train and practice movements associated with climbing. Participant 16 explained that his group was "just kind of having fun putting together a boulder problem seeing who can get it trying to worked it out." Participant 14 noted another climbing game: "So . . . we would play around there and doing stuff and mostly we'd play add on . . . [Interviewer comments removed] . . . or stuff like that." For Participant 12, the focus was on socializing as well as practicing climbing skills:

> Really hanging out with your friends now just because we've been doing it for so long that we literally go to the gym just . . . [to] do the strength training, play around. And, the gym hates us for it but will try all our different knots out and we'll belay with münter hitches.[16]

Furthermore, Participants 5, 14 and 17 saw the climbing gym as a way of preparing climbers for outdoor climbing. Participant 5 viewed the climbing gym as a place to "work on . . . my weaknesses" and further stated:

> I find that if I go to the gym that's a training session basically and it's to get ready to go outdoors, obviously it's fun [or] I wouldn't be doing it, but

[16] A type of knot used for belaying and repelling in rock climbing.

> there's a focus on improving some aspect of my climbing and it's compacted into 3 hours max maybe.

Participant 14 explained the training and teaching component of indoor climbing,

> And . . . so not that the indoors is . . . in anyway a kind of bad thing . . . or a necessary evil, but that it's a kind of a stepping stone for allowing them [beginners] to get comfortable . . . [Interviewer's comment removed] . . . and it can expand what they can do inside but also outside.

Attarian (1999) found that indoor climbing gyms were the primary way people were introduced to rock climbing. Participant 16 explained that the gym "made really good use of that space, in terms of . . . [an] instructors' point of view and they got big flat walls that you can teach on . . . they've got really good bouldering." Similarly, Participant 14 would like to have "the wall where . . . part of it is to have teaching features on it." He continued "so belay ledges up higher like maybe half pitch up and then have bolt anchors." The importance of a place to learn to climb was also recognized by Borrie and Harding (2002) who explain that the place where climbers learn to climb influences their perceptions of climbing behaviours (i.e., bolting and climbing adjacent to artifacts).

The training schedule for the climbers was often dependent on the seasonality of outdoor climbing areas and climbing trips, and at times was linked to personal physical fitness. For example, Participant 17 scheduled and modified her training sessions based on the seasons:

> so I started training . . . the end of February this year. So I'd be going in to 4-hour sessions, where . . . it's really fun. I really enjoy it. We'd do a

> warm up so, you'd pick the hardest problem you could climb consistently, and you'd work every number up to that one in as many minutes as the number of problem.

Conversely, Participant 13 presented a view of indoor climbing that countered many of the other interviewees: "I used to work at a climbing gym a couple of years ago . . . I don't find it [indoor climbing] transfers over too much actually other than general fitness." This finding is consistent with Eden and Barratt's (2010) view that indoor training results in climbing abilities, skills, and behaviours that are not always applicable to outdoor climbing settings and experiences.

However, the interviewees and other researchers (e.g., Heywood, 2006) have explained how the indoor climbing facilities serve as training grounds for outdoor rock climbing. The interviewees used indoor climbing sessions to improve various aspects of their climbing repertoire. Improvements were noted and appreciated while their general desire for outdoor climbing and replicating these indoor accomplishments outdoors remained (see distinct sport theme).

Physical fitness.

While some interviewees used the climbing gym for skill training, others viewed the gym as a place to improve their physical fitness. They desired space for various types of physical fitness activities including warming-up, stretching, weight training, easy route climbing (e.g., jugs). Participant 16 indicated the benefit of indoor climbing at his gym was to improve climbing endurance. He stated that the gym he frequents had "60 . . . foot walls, there that you can climb

on so, it's like superb training for endurance . . . . It's a good simulator for that outdoor climbing." Interviewees viewed specific activities as helping them build their endurance versus skill development, for example, Participant 16 explained,

> whereas if we're doing endurance training . . . we're spending all our time on the wall, it doesn't matter if we're climbing just sideways with our rope or if we're going doing laps . . . up and down. . . . This year's regionals I was training for . . . I had 20 pound weight vest on.

Similarly, Participant 19 explained one way he used the climbing wall he built in his garage: "I build circuits. Numbered circuits to train endurance." While Participant 20 exclaimed that indoor climbing "gets you stronger for outdoor climbing." She then described the features of the climbing gym that helped her improve her strength,

> [The forty-five degree wall was] a really nice addition to the wall, you can practice really strong bouldering moves on it. . . . [T]hen on top of the 45 is a work out area. It has pull up bars, couple [of] mats, some weights, some stretching stuff.

Participant 8 described similar components in the gym he managed,

> we've also got . . . a weight room and change room and all that stuff downstairs. So it's . . . a good facility for just, staying healthy right. . . . You don't have to come here only to climb hard. . . . [Y]ou can come here as an absolute beginner, someone who never wants to tie into a rope, someone who only wants to lead or . . . someone who just wants to build

> endurance for outdoor climbing and . . . you're going to be treated happily here.

In contrast to Participants' 8 and 20's desire for weight training equipment, Participant 10 wanted space to climb for strength building: "as well yeah just a good place to campus[17] and . . . a good upper body workout . . . I hate working with weights so I always campus routes, arms only."

Seasonality also influenced the ways climbers used the climbing gym to increase their physical fitness. For example, when asked, "Do you do any sport climbing when you're indoors as well?" Participant 8 responded, "Towards the spring just to build up endurance normally endurance power . . . but most of the time my . . . training days are bouldering." Participant 20 mentioned it would be nice to be able to practice ice climbing indoors to get fit for the winter climbing season. This view suggests that climbing gyms can potentially diversify to provide opportunities for year round physical fitness and training. Conversely, Participant 21 explained that she did not view the indoor climbing gym as an appropriate location for skill training or physical fitness because "I don't ever really feel like I get stronger indoor[s]. I feel like, actually, I can barely even boulder indoors because it just hurts . . . my arms hurts or something."

Steffen and Stiehl (1995) suggest that climbing walls are an applicable component in physical education programs because "sport climbing can promote muscular strength, flexibility, and endurance" (p. 44). Similarly, Ryan, Voss and Maine (2001) comment that people climb for fitness and fun. The interviewees' comments and experiences complement the work by Steffen and Stiehl and Ryan

[17] Campusing is typically referred to as climbing which only uses the hands and arms.

et al. because many of them were using the indoor climbing facilities for physical fitness. The climbing facilities became places where the interviewees could practice rock climbing and develop their general physical fitness.

Camaraderie.

The climbing gym was a place where interviewees were able to meet with friends and create new friendships. Freischlag and Freischlag (1993) suggest that individuals are typically introduced to rock climbing through climbing friends. This claim was supported by this study's participants. However, interviewees were not overly concerned if they knew a large faction of the climbing population during a particular indoor climbing session. For example, Participant 15 explained, "if I'm climbing indoors in a gym, I just kind of hook up with whoever is there . . . or I'll have a group of people that we . . . tend to connect [with] before we go and see who's going to be at the gym." However, Participant 5 cautioned "at any gym you don't have that social network until you start going there for a while, then . . . it also becomes a social network." The atmosphere of the climbing gym is very important to interviewees and positive social interactions were paramount to the creation of a preferred atmosphere. For example, Participant 11 explained,

> I find it very comfortable. . . . [I]t's the place where I can go and feel safe and relaxed and regardless of . . . whatever happened . . . that day . . . I can go there and . . . everything else just goes away. Just walk in the door and everyone is smiling and everyone's having a good time and you go and you're climbing and yeah you can't really focus on anything else.

Interviewees such as Participant 12 explained that the climbing gym was more than a place to climb; it was a place to interact with others and socialize whether or not they were climbing during that particular visit to the gym. Participant 12 stated "at the gym . . . we tend to just . . . go there and hang out and we have friends that . . . come there just to hang out and not even climb." The strong social interaction between climbers at the climbing gym and away from the gym was also noted by Wolfe (2007) who found that climbers construct a climbing-based community. Participant 15 postulated that the desirable atmosphere "kind of starts with the philosophy of the gym, what the gym is trying to represent in the climbing community." The comments by the interviewees support Kruger's (2006) perspective that social interactions are important influencers of place meaning and community groups.

According to the interviewees, the layout of the gym can dramatically influence the social interactions as well as the amount of climbing community involvement permitted within the design of the routes, features and operation of the climbing gym. Participant 19 described the climbing community in Edmonton, Alberta, by stating,

> I mean I love Edmonton, but it's not a climbing city, there's no climbing here, there's not much for climbing. There is a community here and it's big and it's really hard, and it's really dense. . . . But I would . . . say that the wall here is crappy, but what makes it good is the individuals that are involved with it.

Participants were able to interact within the climbing gyms depending on their background and experiences. Some participants used their climbing knowledge to be involved within the operation of the gym. Interviewees in the medical profession were able to volunteer their services at organized competitions as an extension of their involvement within the climbing community. Still other participants were members of a climbing team or gym staff. For example Participant 18 mentioned,

> I guess just the whole time that I was on this climbing team, I was also working at the gym and I knew most of . . . the regulars at the gym and had such a core kind of climbing community there and just feeling so at home at the gym and just really added too [it] . . . I wanted to . . . climb but I . . . also wanted to be there because the people that I was there with were really awesome.

Furthermore, Participant 18 commented that she was constantly comparing her new climbing gym and city [Vancouver] to her previous climbing gym in Edmonton, which she felt had a stronger social dimension. Participant 18 expressed elements of place attachment in her connection to her Edmonton climbing gym and elements of place dependence in choosing a gym in Vancouver primarily for its functional climbing space.

The social interactions at the climbing gyms were not always viewed as a positive experience because they sometimes interfered with the desired objectives for visiting the gym. At various times, the participants described what could be considered anti-social climbing behaviours. For example, many indoor climbing

facilities host climbing competitions of various levels of importance (e.g., fun social nights or national competitions). Positive social interactions from competitions were explained by Participant 10, "Even just having . . . friendly competitions often . . . [are] definitely good for community. Like competitions you compete and its fun and most of the time it's not for [any large prizes]". Conversely, some competitions were more serious and were sometimes perceived as being more anti-social. Participant 4 explained more competitive competitions were where people "tended to be a lot more reserved . . . people did not give each other beta because they were your competitors and they didn't want you to get an edge over them". Outside of competitions anti-social behaviours were noted occasionally. For example, Participant 9 explained how the social environment interfered with his climbing and changed when he accessed the gym,

> I usually go pretty early in the mornings with friends who . . . some of whom work there, so it's . . . not as busy or at the evening, but you get different crowds, and so the crowds are part of it too, and for a lot of people, it's . . . a real big social thing. I . . . kind of gotten out of that a little bit only because, I guess for time. You know, you go 'I want to . . . kind of get at work out in and I want to get in and out faster . . . whereas more people don't when I'm gone for 3 hours in the evening and hanging out and seeing friends and . . . that's cool and fun . . . but . . . I'm finding lately, last couple of years, it's better, just go . . . in the morning with the partner and get in get out. I definitely prefer going with a friend or a partner rather than going alone.

Many interviewees were viewing and evaluating the functionality of the indoor climbing facilities. When individuals view a place for its usefulness (i.e., place dependence) crowding has a smaller impact on their perception of the place (Budruk et al., 2008). Apart from negotiating the crowding at the climbing gym caused by other climbers climbing and socializing, the interviewees also had to deal with other groups who were using the space (e.g., climbing teams, birthday parties). Birthday parties were singled out as a necessary evil at climbing gyms,

> So, obviously that gym has to stay in business so, they have things like birthday parties that come in and you kind of just have to accept it because if you want a gym to climb in it is either build your own or deal with what those people have to deal with. So I use the gym to train if there is a birthday party in there it is always slightly annoying because as fun as it is, I'm always trying to accomplish something. (Participant 5)

Interviewees were also unappreciative of other climbers who monopolized on the climbing spaces (i.e., routes or problems), displayed rude behaviours, and who were viewed as "showing-off" their physical strength or abilities. Participant 12 discussed the importance of a good social group and how his climbing group reacts to inappropriate behaviours,

> I would say it's more or less the group of people that you're climbing with because in any sport you're always going to find some jerk that is there. And you see plenty of those at the gym but it's easier for people to be like that in the gym because they don't have to work harder to climb.

Unfavourable climbing behaviours such as being loud, concerned with glorifying accomplishments, and lacking commitment to climbing were also identified by Kiewa (2002). Participant 12's climbing group do socialize but become anti-social when they view behaviours that they do not appreciate and therefore become possessive of their route choices to demonstrate that unwanted behaviour is not welcome. Outdoor climbers have also been found to be possessive and demonstrate ownership of outdoor crags (de Léséleuc et al., 2002). The interviewees seemed to practice particular climbing etiquette that transcended both the indoor and outdoor settings. Conversely, Forrester and Beggs (2001) note that golfers' etiquette (e.g., noise level) changes between the traditional outdoor golf course (e.g., quite noise) and the simulated golf course (e.g., loud noises).

Finally, interviewees also categorized members of the climbing community and physical space of the climbing gyms based on ability (e.g., beginners and beginners' wall), and climbing styles (e.g., boulderers, top ropers, lead climbers, etc.) while generally having positive interactions with the wider climbing community. For example, Participant 17 described a section of a climbing gym: "And then . . . the other room has top ropes set up in it as well for beginner climbers." Kiewa (2002) also found that climbers classified other climbers.

The gym was a place for climbing; however it had a dual purpose for the interviewees. It was also a location to socialize and communicate with the climbing community. These findings are consistent with a behavioural analysis of

sport climbers conducted by Steffen and Stiehl (1995) and Fleming and Hörst (2010) which concludes that social interactions (e.g., encouragement) are an important dimension of climbing. Simultaneously, the indoor facility was also a site where individuality, anti-social behaviour, and segmentation occurred. Importantly, the interviewees noted that the layout of the facility also influenced their ability to socialize with one another. The interviewees' tendency to apply place meanings and associated place identity are reminiscent of the importance of social interactions within the construction of the meanings of place (Fishwick & Vining, 1992; Kruger, 2006; Williams, 2008).

Conclusion

The results and discussion within this chapter addressed the second research question, "What meanings are ascribed to indoor climbing sites?" Through the narratives provided by the interviewees, it was revealed how they interacted with the indoor climbing facilities and other climbers. Three theme groupings, physical site dimension, experiential dimension, and activity focused dimension, were established for place meaning towards indoor climbing facilities. Each of the dimensions contains a series of themes which provided insight into how the interviewees were experiencing and using the indoor climbing facility. Through the use of the indoor climbing facility, the interviewees navigated place meanings that were established by themselves and other climbers within the climbing community. The interviewees were aware of the physical elements of climbing and aware that the climbing site influenced the place meanings of indoor

and outdoor climbing sites. The interviewees saw indoor climbing facilities as artificial settings which enabled them to climb when their proximity to the natural crags, cliffs, and mountains was constrained. Furthermore, the interviewees suggested that selected physical elements from outdoor climbing should be replicated in indoor settings so that their indoor experiences might mimic their outside experiences.

Through their use of the indoor climbing facilities, the interviewees evaluated their climbing (i.e., experiential dimension) and the setting of their climbing. Furthermore, they explained how the indoor environment is quite different from the outdoor environment while containing some similarities. The majority of the interviewees focused on climbing outdoors and use indoor climbing sessions to prepare for outdoor climbing. However, the interviewees were loyal to their climbing gyms and were active in responding to and establishing their own and/or climbing community meanings for these places. Loyalty may be stronger to the indoor place than the outdoor places because the interviewees tended to climb in several outdoor sites rather than adopting a single site (see Chapter Four: variety theme). This finding is consistent with the views of Asci and colleagues (2006). The meanings that the interviewees applied to their indoor climbing facilities established meaningful places related to the interviewees' comprehension of the indoor and outdoor site differences, desires to climb outside, reactions to seasonality, and specific gym loyalty.

Indoor climbing places supported the activity focused dimension for the interviewees participating within the sport of climbing and were associated with

objectives such as training, physical fitness, and camaraderie. Within the activity focused dimension, indoor climbing facilities were associated with place meanings which were evaluations of their usefulness for training, physical fitness, and camaraderie. Favourable assessments enticed the interviewees to return quite often, influencing and interacting with others in the process which contributed to the development of a climbing community.

This chapter examined the interviewees' narratives about indoor climbing. It was found that indoor climbing and indoor climbing places were seen as distinct from outdoor climbing and places. The interviewees developed and interacted within place meanings connected to their indoor climbing places. Furthermore, the indoor climbing places were collections of place meanings for the interviewees even though the facilities were purpose built for climbing. This finding supports the comments of Bale and Vertinsky (2004) that places are unique and contain specific place meanings. Finally, the interviewees characterized the indoor climbing facilities through their use and negotiation of place meanings. The indoor climbing facility is therefore a place for climbing which contains physical, experiential, and activity focused dimensions that enable the interviewees to express their climbing identity.

Chapter Six furthers the discussion on climbing places by considering the dialogue concerning place meaning and climbing places from Chapter Four and Chapter Five through a comparison of these two distinct settings. Thus, the dissertation's explanation of climbing place meanings began with a basic climbing setting and followed the interviewees' narratives with implied meanings

through to specific meaningful places and will be concluded by responding to the guiding research question “What transforms a climbing space into a climbing place?”

Chapter Six: Summation, Discussion and Conclusion

Introduction

The spaces used for recreation, leisure, and sport activities are infused with individual and collective meanings. These meanings transform people's perceptions of spaces into meaningful places. It is within this context that this research was positioned as an investigation of place meaning related to outdoor and indoor rock climbing sites. Contrasts between natural and built settings provide a unique opportunity to gain insight into place meaning. The fundamental question guiding this research was "What transforms a climbing space into a climbing place?"

Chapter Six concludes the research by focusing on research insights, implications, reflections of the research methods, and directions for future research. It begins with a summary of Chapters Four and Five and then moves to descriptive comparisons of place meaning themes for the outdoor and indoor climbing sites. This is followed by a discussion of the implications in terms of the major scholarly insights pertinent to place research. Practical implications for resource management and rock climbers are then presented followed by methodological reflections and suggestions for future place and climbing related research. Chapter Six concludes by considering my personal climbing frame of reference and by revisiting the research questions.

A Comparison of Place Meaning in Outdoor versus Indoor Settings

Analysis of the interviewees' narratives about their outdoor climbing experiences resulted in eight themes which were grouped into three dimensions (Table 6.1). In terms of the indoor narratives, nine themes emerged and these were also clustered into three dimensions. A reading of these themes and dimensions made evident a variety of similarities and differences between the place meanings associated with each setting.

A Comparative Thematic Matrix

Table 6.1

Comparative Thematic Matrix

Dimension		**Outdoor**	**Indoor**
Physical Site	***Themes***		
	Accessibility	✓	✓
	Site Attributes	✓	
	Variety	✓	
	Artificial		✓
	Recreating Nature		✓
Experiential	***Themes***		
	Learning	✓	
	Exploration	✓	
	Escape	✓	
	Distinct Sport		✓
	Outdoor Desires		✓
	Loyalty		✓
Social	***Themes***		
	Social Interactions	✓	
	Mecca	✓	
Activity Focused	***Themes***		
	Skill Development		✓
	Physical Fitness		✓
	Camaraderie		✓

Summary of Findings

The analysis process permitted the themes to emerge from the climbing narratives. Therefore, some themes appear in both the indoor and outdoor settings while others fit within a specific setting (Table 6.1). An overview of the findings from Chapter Four and Chapter Five follows as a prelude to a comparison of the place meanings of outdoor and indoor climbing sites.

Outdoor climbing sites: Significant place of exploration and escape.

In order to gain insight into the place meanings associated with outdoor climbing sites, characterisations of climbing places were unpacked through an analysis of the interviewees' climbing narratives. Chapter Four addressed the first research sub-question, "What meanings are ascribed to outdoor climbing sites?" Eight themes were grouped into three dimensions which emerged based on the interviewees' reflection on the climbing sites and their meanings (Table 6.1). The first dimension focused on the physical site characteristics of the climbing places including the emergent themes of accessibility, site attributes, and variety. Second, the social dimension emerged as an important influencer of where, why, and how climbers interacted with each other and indicated the ways in which the climbing culture shaped place meaning by defining climbing meccas and important routes. The experiential dimension was the third grouping and focused on how the interviewees' actions within the sites influenced their place meanings. Themes included learning, exploration and escape. Each dimension had a major impact on place meaning and so were all interrelated (Figure 4.1). Through climbing related activities, the outdoor climbing site was transformed from a

purely functional site to a meaningful place where the interviewees were able to socialize with other climbers, express their identities as climbers, and escape their urban realities while exploring the climbing site and its surroundings.

Indoor climbing sites: Artificial places for socialization and training.

Chapter Five presented insights into indoor climbing sites which were acquired through analysis of indoor climbing narratives. Specifically, Chapter Five addressed the second research sub-question "What meanings are ascribed to indoor climbing sites?" Three dimensions emerged based on nine themes (Table 6.1). The physical dimensions of the indoor climbing facility influenced the interviewees' behaviours in and surrounding their climbing activity. While the indoor setting was viewed and accepted as artificial, natural elements within these settings were appreciated (e.g., lighting and vertical element), and geographic proximity influenced accessibility. Two themes, artificial and recreating nature, were used within the discussion to highlight the important idiosyncrasies of indoor climbing sites (e.g., marked holds and natural lighting) that might be overlooked within a single site characteristics theme. Within the experiential dimension many interviewees expressed a preference for diverse features but they exemplified a loyalty to the climbing gym they frequented. Finally, the activity focused dimension of indoor climbing facilities tended to centre upon training for climbing, general physical fitness, and camaraderie. While the outdoor climbing setting had a socialization dimension wherein social processes informed place meaning the indoor climbing setting hosted social interactions. At times the interrelationships between the themes and dimensions made classifying the

themes difficult. While the notion of camaraderie could be associated with the experiential dimension it is important to note that the camaraderie theme was relevant to the activity of climbing and thus included within the activity focused dimension. The place meaning for indoor climbing facilities can be summarized as an artificial climbing site with a perceived functionality which enables skill development and physical fitness in a supportive social setting.

Distinct Place Settings: It's more than the Physical Attributes

This section of Chapter Six presents a focused summary of the similarities and interpretations of some dramatic differences in the place meanings of outdoor and indoor climbing settings.

Similarities.

The place meaning similarities between outdoor and indoor rock climbing settings provide insight into the activity of rock climbing as an enduring activity and the specific climbing features of outdoor and indoor climbing settings. The first similarity is in relation to the interviewees' definitions of accessibility. While the actual distance traveled to outdoor sites and urban climbing facilities differed, the interviewees were sensitive to the accessibility of their chosen climbing sites. Accessibility was often viewed as a trade-off between convenience and quality of the experience caused by crowding, excessive allotments of time to access the site, and financial considerations.

Secondly, the common threads across both climbing settings were captured under the themes of site attributes, artificial, and recreating nature. Indicators of these themes included the functionality of the physical features

including the style and types of routes, textures, spatial layouts, and visual elements.

Finally, some site attributes transcended the outdoor and indoor climbing sites. For example, interviewees appreciated comfortable temperatures, natural lighting, and ample space for socializing, resting, warm-up, and climbing. While outdoor climbing sites contained a specific identity, some indoor sites also gained notoriety for their community, routes, and route setters, which were similarly a focus within the outdoor narratives. Place meaning, therefore, contains a strong focus on the functionality of site attributes, an acceptance for artificial spaces in built settings, and specific place identities.

Differences.

While the outdoor and indoor settings have similarities, important place meanings distinguish these two settings. Differences included: 1) importance of a variety of climbing options; 2) composition of the experiential dimension; 3) outdoor social interactions and meccas versus indoor socialization; and 4) skill development and physical fitness focused within indoor climbing.

Importance of a variety of climbing options.

A specific distinction between the outdoor and indoor climbing settings and place meanings emerged in the theme of "variety." Though this theme was a minute component in the indoor themes it was a dominant outdoor theme. Place meaning within the outdoor and indoor context was an important determinant in whether the interviewees' sought specific features through a variety of settings

(i.e., outdoor) or dedicated patronage to one specific place with constantly changing site features (i.e., indoor).

Composition of the experiential dimension.

The labelling of the themes within the experiential dimension signifies the distinct differences between place meanings of outdoor and indoor climbing settings (Table 6.1). The outdoor place meanings centred on learning about the self and climbing with a desire to escape the realities of home and continue the exploration that is part of climbing history and lore. Indoor place meanings exemplified the interviewees' place loyalties and isolated the indoor activity of climbing as a distinct sport from its outdoor counterpart, while the interviewees maintained a desire for outdoor climbing. Finally, the indoor climbing facilities were associated with a sense of loyalty which provided a base for the place meanings because loyalties were well defined and place specific.

Outdoor social interactions and meccas versus an indoor camaraderie.

The outdoor social themes of social interactions and meccas were grouped into the social dimension while the indoor social interaction was synthesized into one theme, camaraderie. The social interactions described within the narratives document two interesting differences within the place meanings of these two settings. First, the outdoor setting was a place of social inclusion and social avoidance while the indoor climbing facility was presented as a place of social inclusion. Secondly, the outdoor climbing setting was a location for personal development, personal accomplishments, and history connected to the general climbing community while the indoor climbing settings were not described in the

same manner nor did they develop or maintain that level of cultural/group place meaning. While the indoor climbing setting was presented by the interviewees as an socially inclusive setting there were also accounts where climbers described their ownership or an imposing presence at the site and anti-social behaviours (e.g., choosing to climb when friends were not able to join and during competitions when beta was not shared).

Skill development and physical fitness focused within indoor climbing.

Narratives about the activity of rock climbing at indoor climbing facilities explained how the facilities could be used to enhance the climbing body through skill development and increased physical fitness. Interestingly place meaning for the indoor climbing facilities included the spaces' utility for climbing in terms of skill development and improving one's physical fitness. This is countered by the place meaning of outdoor climbing places where sites were used to demonstrate and challenge a climber's skill, and which therefore became markers of accomplishments, current abilities, and the locations of future conquests. Interestingly, narratives about outdoor climbing experiences did not dwell on physical fitness. The physical fitness required for outdoor climbing was potentially implied through the interviewees' skills and accomplishments because a certain level of fitness is required to access the outdoor climbing sites and complete the problems and routes.

Informing Place: Major Scholarly Insights

This dissertation mapped a study of place meanings and resulted in important insights that can be applied to rock climbing and place research. The section focuses on three of these contributions: 1) implications of social interactions; 2) setting and loyalty implications; and 3) establishing relationships with places. Place attachment theory informs the interpretation within these sections. Furthermore, additional theories and concepts are examined, where applicable, for their contribution to interpreting place meaning and rock climbing

Implications of Social Interactions

Social interactions are an important component of outdoor and indoor climbing, however, the interaction varied between the two settings in terms of climber behaviour and the social significance of the climbing sites. The dimensions of place attachment inform the interpretation of the following two subsections: 1) social outdoor avoidance and indoor inclusion; and 2) meccas versus "it's just a gym."

Social outdoor avoidance and indoor inclusion.

Places are sites of social interactions (Kyle et al., 2005) which in turn influence place meaning (Williams, 2008; Wynveen et al., 2012). Likewise, rock climbing is a social activity which often relies on the support and knowledge of other climbers. Social interaction for the interviewees was a complex balance as there were times that the interviewees attempted to avoid other climbers, while at other junctures they embraced the social inclusion offered by others. The place

attachment dimensions of: 1) social bonding; and 2) belongingness and rootedness can inform our understanding of the climbers' social interactions.

Social bonding.

Previous research has suggested that place meanings are influenced by social interactions within a place more than they are associated with the physical elements of the site (Kyle & Chick, 2007). Interestingly, the interviewees distinguished between different social bonding within their immediate climbing group and other climbers depending on the location of the social interactions. At times, the interviewees sought solitude in remote climbing areas and at other times they embraced wide ranging social inclusion with others. Social bonding is a dynamic component of the rock climbing experience and the current research demonstrates that social bonding is complex with a multitude of definitions and scales. Therefore, the current study highlights that social bonding is an important dimension to include in research about place attachment and adventure activities because it both positively and negatively influences place meaning. Furthermore, the interviewees' attachment to place was influenced by their social bonding within the climbing sites which confirms social bonding's influence in place meaning (Williams, 2008; Wynveen et al., 2011) and its' relevance as a dimension of place attachment (Kyle et al., 2005).

Belongingness and rootedness.

Place belongingness defines an individual's emotional perception of a connection to a specific place (Hammitt et al., 2009). The interviewees alluded to an emotional connection to their climbing places, specifically inclusion,

integration, and ownership. Whether the climbing sites were indoors or outdoors, climbers interacted with other climbers and the characteristics of the site. Through social interaction and commonalities, the interviewees created a connection or bond to their climbing sites. This study confirms the importance of feelings of belongingness in relation to outdoor and indoor recreation spaces.

Rootedness defines a geographical connection to place through aspects of ancestry and settlement (Hay, 1998). Within the outdoor narratives there was evidence of a connection to the landscape through family, friends, and the larger climbing community. The interviewees, while not personally connected to their outdoor climbing places through direct ancestry and settlement, were connecting with the sites through their own accomplishments and a sense of association with the climbers who had climbed before them and developed the climbing sites. Rootedness can be felt and or nurtured through friends and family who have previously discovered and climbed at the site. This is exemplified by the repeated use and demonstrated ownership that climbers reveal in relation to specific crags (de Léséleuc et al., 2002).

Various studies have explained that rock climbers claim and protect their ownership of specific climbing sites through social interactions (e.g., Cailly, 2006; de Léséleuc et al., 2002). These social interactions warrant further consideration, especially as the interviewees did not demonstrate high levels of site protectionism. The interviewees indicated repeated use and at times attachments for specific indoor and outdoor sites but their possessiveness was not strongly expressed. Their social interactions and climbing behaviours centred on

the act of climbing in association with social interactions and escapism from stressors, the everyday occurrences, and the urban environment. Similarly, Cailly (2006) explained that the social actions of the climbers at the climbing sites are not simplistic. Different groups and sites had different social underpinnings (Cailly, 2006). While the general consensus of the interviewees defined the indoor climbing facilities as a socially welcoming and engaging atmosphere, Participant 12 expressed that he and his peers felt that they were more possessive of their indoor space because of the strong indoor social elements. For example, Participant 12 stated,

> we know when new staff members come in because . . . we'll see them being trained [and we are] like '. . . okay, how can we mess with these guys.' But now, I mean . . . we all kind of know each other in there and then it's really comfortable.

Perhaps there are cultural, geographical or crowding issues at play in the areas identified by de Léséleuc (2004) and Cailly (2006) which assisted in the protective and restrictive social behaviours of these certain climbing groups. The conflicts that occur within indoor or built recreation settings appear to be under researched as academics are just beginning to explore these artificial settings. Also, at a majority of the outdoor climbing sites the interviewees were not locals and perhaps perceived the social interactions with other tourists differently than a group of local climbers might.

Lastly, de Léséleuc (2004) explained that "a community of belonging develops" (p. 95) through the interactions of the climbers and this is corroborated by the indoor and outdoor narratives provided by the interviewees.

This social connection demonstrates the concept of communitas (Turner, 1973; Wang, 1999) and tourist communitas (Lew, 2011) where broad social interactions and physical activity influence bonding. Similarly, communitas and the liminal experience of being a lifestyle climber[18] are suggested to contribute to the existential authenticity[19] of the lifestyle climber through social interactions occurring away from the cliff and or rock (Rickly-Boyd, 2012). The current study confirms prior explanations of belongingness and rootedness but furthers these by underlining the importance of the broad group classification (i.e., rock climbers) on the place meanings in a social context. Wang (2000) explains that existential authenticity occurs in "liminal experiences, [where] people feel that they are themselves much more authentic and more freely self-expressed than they are in everyday life" (p. 49). Within the liminal experience, "Participants are free from constraints of daily living and can behave in a way not governed by conventional social norms and regulations" (Kim & Jamal, 2007, p. 185). While this is not an in-depth summation of existential authenticity, the interviewees' self-identifications as climbers were evident throughout their climbing narratives, which identified their trials, successes, behaviours, and interactions with other climbers. As demonstrated by these findings, the concept of existential

[18] Lifestyle climbers are "a subculture of highly dedicated individuals who give up permanent residences for the full-time pursuit of this sport" (Rickly-Boyd, 2012, p. 85).
[19] Existential authenticity is applicable for exploring tourist experiences because it is activity/action based and results in self-reflection (Rickly-Boyd, 2012; Wang, 1999).

authenticity appears to warrant further consideration when investigating the experiences of avid indoor and outdoor climbers and their place meanings specific to their choices of climbing sites (e.g., meccas).

Meccas versus "it's just a gym."

The interviewees' highlighted their interest in and the importance of different climbing routes and sites within the climbing community, hence the "meccas" descriptor captured the importance of these climbing sites. Important recreation meccas have been acknowledged by other communities of outdoor recreationists (Brehm, 2007; Fix, Loomis, & Eichhorn, 2000). Place meanings classified the indoor climbing facilities as functional sites for the development of climbing skill and for progressing in climbing ability. Since skills and accomplishments did not obtain the same importance or influence within the interviewees' narratives the "it's just a gym" sentiment stands out. The following discussion identifies the functionality aspect of the climbing sites within place dependence.

Place dependence on specific indoor climbing facilities and on multiple outdoor sites.

Place dependence is an important dimension of place attachment which "refers to the value that recreationists ascribe to settings because of the settings' specific attributes that facilitate leisure experiences" (Kyle et al., 2004c, p. 67). Based on the narratives, it is apparent that the indoor facilities were functional sites. Interviewees compared numerous indoor climbing facilities which made it apparent that they were prescribing a value to specific facilities based on climbing

site features. The evaluative measures included, but were not limited to, physical layout of the facility, climbing space, climbing features, social space, and route or problem layouts. When these measures were perceived positively the interviewees demonstrated a loyalty to a specific facility, and they harshly criticized competing indoor climbing sites.

Interviewees described the functionality of outdoor climbing sites and identified the elements they used to measure the sites' utility. Compared to the indoor climbing facilities, interviewees tended not to be loyal to one specific outdoor climbing site. Interviewees were more interested in completing multiple routes or problems at various outdoor climbing sites. They were essentially "collecting" accomplishments of routes and occasionally of sites. At times they did, however express loyalty to one region. For example, interviewees mentioned the Buttermilks or Jasper National Park as destinations for climbing. They indicated that they would visit multiple crags during climbing trips within those regions.

Place dependence is an important identifier of the functionality of recreation sites, specifically rock climbing sites. While previous research has suggested that recreation users evaluate the functionality of a site and become dependent upon that specific site, the analysis of the narratives within this study demonstrates that place dependence is not a simplistic "either/or" type of measurement of a value added by the place features. Given this dependence on indoor climbing facilities, this study is consistent with current place dependence research that suggests that people will evaluate their recreation places and choose

the site with the resources that best meet their needs. In the outdoor setting, however, the findings indicate that climbers could be dependent upon broader climbing regions which offer specific qualities for rock climbing (e.g., boulders in a desert setting, star rated routes, crack climbing). Interviewees travelled to the outdoor settings, therefore their place dependence might parallel that of traveling scuba divers "who recorded higher place dependence" than local divers (Moskwa, 2012, p. 40). Interestingly, interviewees were dependent on multiple sites. Place dependence signified specific site attributes which were typically specific to one indoor site/facility and multiple outdoor sites. Future research should explore dependence at varying spatial scales (e.g., region vs. sites) and landscape types.

Setting and Loyalty Implications

Perceptions of the broad physical outdoor and indoor settings and climber site loyalties can be further understood through unpacking the specific place meanings of the interviewees. Place meanings and place attachment can inform interpretation of the interviewees': 1) perceptions and use of physical sites; and 2) their loyalty to the site. Rock climbing involves an intimate interaction between the climbers and the objects they climb, therefore they have complex understandings of their abilities, the objects and their settings.

Perceptions and use of physical sites.

Consistent with previous research, the interviewees demonstrated that place meanings are influenced by the physical characteristics. Place meanings contribute to the understanding of place familiarity, place affect, restorative

effects, belongingness, place dependence, and place identity within the outdoor and indoor rock climbing context.

Place familiarity.

Place familiarity is a combination of memories and perspectives about specific places (Hammitt et al., 2006). This study showed the climbers' interest and behaviour towards climbing in an array of different locations and regions of which they were knowledgeable. Typically they did not spend an extended period of time at one outdoor climbing site. Despite this lack of prolonged experience in the setting, the interviewees demonstrated an in-depth knowledge and familiarity of their climbing sites. This is contrary to suggestions in the place attachment literature that identified prolonged residence as an important precursor of place attachment (Hernadez, Hidalgo, Salazar-Laplace, & Hess; 2007; Tuan, 1975) at times the interviewees were demonstrating an attachment to place which was influenced by a strong place familiarity. Rock climbing is a resource intensive activity where climber safety and enjoyment of the activity depend on site knowledge. Furthermore, other climbers and climbing publications (e.g., magazines and guidebooks) provide supporting information to the climbers accessing outdoor sites. Interestingly, specific indoor climbing facilities were frequently patronized and climbers developed detailed comprehensive knowledge about these sites. Similar to the outdoor sites, the indoor climbing facility was defined by a combination of memories, experiences, and perspectives. The indoor settings were locations of prolonged and repeated patronage; therefore the

interviewees' familiarity developed through an extended length of association which is congruent with previous research (Smaldone et al., 2005a, 2008).

The interviewees' place familiarity was characterized by a deeper cognitive and affective connection to the indoor climbing place than they admitted when asked directly during the interview. The interviewees revealed an interesting interplay between the specific knowledge or familiarity that comes through continued use (i.e., dependence) and dedication to the sport/activity. Hammitt and colleagues (2006) state that place familiarity demonstrates the greatest site knowledge. Combined with the findings of the current study, these findings support the inclusion of place familiarity in further place attachment research. This is particularly relevant in relation to resource dependent activities such as rock climbing.

"Real rock" versus "pulling on plastic."

During the interviews, the interviewees made remarks about climbing on "real rock" outdoors versus the "pulling on plastic" holds of indoor facilities. Rock climbing sites are an example of recreation spaces being recreated and constructed to mimic outdoor settings and to offer climbing opportunities where natural climbing options are not prevalent (Kural, 2010; Rabinowitz et al., 2010; Tivers, 1997). The concepts of the simulacrum and of hyperreality provide applicable constructs through which to understand the vague boundaries of the indoor climbing settings.

Indoor climbing facilities present rock climbing in a range of artificiality from colourful artistic settings to ones that realistically mimic the natural setting

(see Figure 1.1). Hyperreality is the term used to describe the representation and presentation of the artificial as the real (Rojek, 1990; Urry, 2008). Jean Baudrillard (1981/2001) defines the simulacrum as four stages of reproduction or hyperreality. The four stages present a continuum where the original is copied, reality is distorted and then mimicked, and then turned into the simulacrum where the real does not exist (representing the far right site classification in Figure 1.1). One might argue these stages of the continuum could be represented by various components of climbing facilities, as well as the entire space. Through the perspective of hyperreality, the indoor facility can be interpreted as a representation of the rock climbers' desired climbing setting. The facility is then "presented as authentic or authentic reproductions" (Urry, 2008, p. 131) of naturally occurring climbing areas. However, the interviewees in general did not embrace the hyper-real climbing facility as a definition of what rock climbing settings are or should be; they were accepting of artificial climbing facilities as settings with their own style and function. As the indoor climbing facilities moved towards offering more hyper-real representations of the climbing features and spaces, the interviewees remained focused on how the setting enabled them to climb. The interviewees stated that they valued the functional climbing features over natural features they were meant to resemble. In some instances, they valued the new artificial forms that indoor climbing embraced over attempts to mimic natural climbing features: for example the creation of new routes and the act of using unique items to replace traditional climbing holds during a climbing competition. While the indoor climbing facility appears to be the hyper-real

climbing crag, the indoor facility represents a climbing setting different from the outdoor context and to which interviewees established place meanings.

Interestingly, in the outdoor context interviewees acknowledged that the artificial colours and route markers of the indoor climbing facility could negatively impact their route finding abilities outdoors where holds and routes are not marked on the rock. This is potentially where the hyper-real climbing facility has an impact on the interviewees' climbing experiences. Therefore, place meanings were influenced by the real and hyper-real mimicry of the two different settings. This suggests that additional layers of place meaning will surface as new forms of built sport and recreation settings emerge. In relation to the establishment of indoor climbing facilities, some researchers have noted that processes such as globalization result in places becoming placeless or non-places; in essence places are losing their meanings (Bale & Vertinsky, 2004; Urry, 2008). However, the interviewees have demonstrated that indoor climbing facilities have their own specific place meanings that help define the facility as a climbing place but also distinguish it from other indoor climbing facilities. The indoor climbing facility is not generic or placeless. While previous research has been conducted on aspects of built sport facilities further research is needed to understand these perceptions especially through hyperreality.

Place affect.

Emotions directed towards a certain place are referred to as place affect (Halpenny, 2001). Consistent with previous research (Giuliani, 2003; Manzo, 2003, 2005) the narratives provided by the interviewees contained positive,

negative and ambivalent emotions and feelings towards their outdoor and indoor climbing places. Positive emotions were related to climbing successes, climber relationships, and feelings of happiness and joy. Unaccomplished climbing routes/problems, injuries and crowded climbing sites (e.g., numerous indoor birthday parties) were associated with negative place related emotions and feelings. Notably, this negative place affect did not discourage climbers from climbing; it encouraged them to be adaptive. For example, Participant 7 was injured on a climb and explained,

> I want to go and do that same route again. Someone else can lead that pitch [where I had my accident] and I'll top rope it. But yeah I'm definitely going back to do Raptor next year. Because I want to climb that route up there, climb that pitch on top rope.

Finally, at times the interviewees expressed ambivalence towards climbing sites through expressions such as "it's a place to climb" as exemplified by Participant 6.

Restorative effects of nature and physical activity.

Previous research has identified that visiting natural areas and being physically active have restorative effects on an individual's health and wellbeing. Restorative experiences have been defined as escape, relaxation, and self-reflection (Korpela et al., 2001). Typically these experiences are studied in relation to natural settings (Korpela & Hartig, 1996; Korpela et al., 2001). For example, veteran "extreme sports participants . . . report developing an intimate

and reciprocal relationship with the natural world" (Brymer & Gray, 2010, p. 361). Consistent with conclusions expressed in the literature, interviewees were using their climbing places and the activity of rock climbing for restorative effects, to connect with nature, and to escape everyday stressors.

Interestingly, the interviewees in the current study noted an improvement in their mood and perspectives when they climbed in both indoor as well as outdoor climbing settings. This is an important and under-reported example of place dependence. Therefore, this study expands the understanding of restorative effects of nature and physical activity because the recreated climbing environment contained within the indoor climbing facility is influential in providing a restorative experience. In short, restorative effects were obtained from both types of settings with the social element appearing to fulfill an important role in this outcome. The current research findings suggest that restorative effects should be further explored in multiple settings and through place meanings and place dependence.

Loyalty to the site.

Whether referring to outdoor or indoor settings, the interviewees maintained a multi-dimensional loyalty to the sites they climbed. Their place meanings revealed belongingness, place dependence, consumption, and place identity in relation to a multitude of climbing sites.

Belongingness through site possession and ownership.

Belongingness is defined as an individual feeling that they are connected to a specific place (Hammitt et al., 2009; Proshansky et al., 1983). The

interviewees described behaviours where they felt they were part of the community of the climbing facility or where their group claimed possession and or ownership of specific spaces within the facility.

Similarly, in reference to outdoor settings the interviewees described behaviours that highlighted possession and ownership and therefore belongingness to specific outdoor sites. The interviewees described pro-environmental behaviours at specific sites which included activities such as trail maintenance, possession and ownership, and comparisons between their "usual" and "other" climbing sites. Furthermore, while travelling to climb took the interviewees to different climbing destinations, they always returned to the places from which they came and to which they belonged.

The current study indicates that belongingness is a personal perspective about the connection to specific sites. This belongingness was occasionally demonstrated as site loyalty.

Place dependence on indoor sites versus consumption of outdoor sites.

Sites and services are consumed by recreationists and tourists (Urry, 2008); the interviewees in the current study are no exception. The place dependence demonstrated for indoor settings and as associated with the theme of loyalty exemplifies the consumption where sites are used. However, it is the uniqueness of place and the objects that are part of these places that merit further attention. Such places are collected or consumed because of uniqueness or status representations (Urry, 2008). Uniqueness is also associated with place dependence (Gibbons & Ruddell, 2009; Jacob & Schreyer, 1980). In terms of

outdoor settings, interviewees consumed places by collecting routes and sites for status, self-confidence, and the act of rock climbing. Similarly, travel decisions are influenced by components of conspicuous consumption including an individual's perceptions of self-identity and uniqueness of the destination (Phillips & Back, 2011). Furthermore, the themes of variety, novelty, and escape reflect place meanings that exemplify perspectives of the climbers' "gaze" (Urry, 2008). Each place can be gazed upon differently and each gaze is influenced by society, history, and time (Urry, 2008). As Urry writes "Places are chosen to be gazed upon because there is anticipation, especially through daydreaming and fantasy, of intense pleasures" (2008, p. 3) based on the perceived uniqueness or difference from the mundane which reflects the themes from the current study.

The tourist gaze as a form of consumption and collection of places seems to contribute to understanding the connection between recreation users (i.e., climbers) and their place meanings. These concepts warrant further attention to understanding the place meanings of specific indoor and outdoor sites.

Place identity.

Place identity is a cognitive association of an individual's identity with "a host of attitudes, values, thoughts, beliefs, meanings, and behavior tendencies" toward a specific place (Proshansky et al., 1983, p. 62). Place identity forms through behaviours within a place and acts as an identity marker within social settings (Sarbin, 1983). In this study, the climbers sometimes established a place identity with specific climbs and climbing areas. Narratives about rock climbing in outdoor settings openly acknowledge place identity. Conversely, interviewees

were less open to consciously having their self-identity linked to an indoor place identity. However, the indoor facility was a place of loyalty, social interactions, successes, and dimensions of place attachment which constitute a subtle and/or subconscious place identity. It is possible that outdoor place identities are seen as having a desired status where the interviewees' climbing identity improves through their climbing site consumption and attempted and completed climbs. Interviewees had a place identity associated with outdoor places that had personally or socially constructed place meanings (Dixon & Durrheim, 2000; Kyle et al., 2004c) and they had an indoor place identity. Multiple place identity has not received much acknowledgement within the literature, however it seems prominent for this group. Furthermore, place identity is not limited to individuals; groups (Dixon & Durrheim, 2000; Knez, 2005; Kyle et al., 2004c) such as climbers can socially construct places and group identities. For example, certain climbing sites are recognised for their importance within the climbing community and the interviewees remarked that these were important climbing locations to experience as climbers where they could challenge and demonstrate their skills.

Establishing Relationships with Places

Considering the preceding discussion of place meaning and climbing settings, this section focuses on relationships (i.e., place attachments) with outdoor sites before considering the neglected facets of attachment to indoor climbing facilities. There is a lack of research comparing place attachment to two recreation places through the same activity. Therefore two discussions are presented: 1) attachment to outdoor settings through use and culture; and 2)

attachment to indoor settings through a sense of ownership. The main argument in this section is that relationships to place occur through site interactions in two different settings.

Attachment to outdoor settings through use and culture.

It was apparent from the outdoor climbing narratives that interviewees associated place meanings with their climbing sites. Specifically, their use of climbing sites exemplified the dimensions of place attachment (see Figure 2.2). They sought specific climbing features and site attributes (i.e., place dependence) while their knowledge of sites and routes (i.e., place familiarity) provided understanding, purpose, and desire to become accomplished climbers. Therefore, the pull factors (Moskwa, 2012) which attract the interviewees include the physical site features. Pride in these accomplishments that are linked to the sites are indicators of place identity. The research confirms that the social groups (i.e., the broader climbing community) influence place meaning and place identity by marking significant sites (Dixon & Durrheim, 2000) which ties into their collective place identity (Kyle et al., 2004c). Furthermore, the stated outdoor behaviours of the climbers suggest they might not be deeply rooted to specific places because they openly seek out new climbing places. Hay (1998) suggests that rooted recreationists are less likely to search for new places, which is consistent with the interviewees' indoor climbing facility choices but contrary to their outdoor behaviour. However, these climbers might demonstrate a new perspective on rootedness because exploration and a connection to specific places are inherent in the activities of mountaineering and rock climbing. Finally, rock

climbing is a social activity which depends on social interactions (e.g., climbing partners) and the narratives contain comprehensive references of individuals and groups who contribute to the place meaning of climbing sites. Furthermore, the members of the global climbing community recognize the importance of specific sites, thereby demonstrating the scope and influence of social bonding within place attachment and climbing.

Attachment to indoor settings through a sense of ownership.

Through declarations such as the "gym is only a place to climb," a majority of interviewees suggested that they were not emotionally attached to indoor climbing facilities. However, deeper analysis of the interviewees' climbing recollections indicated that they were displaying place attachment. This inconsistency should be recognized. It is important to unpack place attachment beyond explicit statements in order to gain insight into attachments that may be subconscious.

While a majority of the interviewees claimed that they were ambivalent to the indoor climbing facility and their identity was not associated with the facility, narrative analysis demonstrated some interesting paradoxes. The interviewees typically had a positive emotional response (i.e., place affect) to the indoor climbing facility close to their "home" environment (i.e., place dependence, belongingness). Furthermore, the indoor facility was meaningful through extensive use and place familiarity combined with a climbing support network of friends and family (i.e., social bonding). They tended to claim ownership and a vested interest over these climbing spaces and expressed a loyalty to the facility

(i.e., place identity, belongingness and rootedness). This research indicates that rock climbers are place consumers who, while expressing ambivalence, actually form a strong connection or bond (i.e., place attachment) with the specific place.

Addressing the Literature Gaps

The review of literature highlighted two gaps within the place meaning literature (Figure 2.3) and one gap within the place attachment literature. Gap one highlighted a requirement for increased research about the characteristics and place meanings of outdoor climbing sites. This research demonstrated the complex matrix of meanings (i.e., physical site, social, and experiential) associated with the tangible and intangible characteristics of climbing sites.

Discussion of the second gap focused on the need to advance understandings about the characteristics of indoor recreation and sport spaces and their associated place meanings, especially in terms of rock climbing. This research revealed that indoor climbing sites are meaningful places based on unique physical, experiential, and functional characteristics.

Through completing this study a third gap emerged which addressed the lack of research on place attachment and rock climbing. By reviewing the six place attachment dimensions in the context of the interviewees' climbing narratives it became clear that the interviewees established place related bonds. Interviewees' demonstrated place related social interactions, knowledge, identities, dependences, belongingness, and affections. The order and strength of these attachment dimensions varied between the interviewees, the settings and individual climbing sites.

Informing Place: Practical Recommendations

Understanding place meaning of climbing sites has practical implications for those managing these particular resources and the climbers who make use of their features. The following recommendations are meant to aid resource managers and rock climbers to positively influence the climbing experience of rock climbers in outdoor and indoor climbing settings. These insights should be taken as starting points because different sites will have specific idiosyncrasies.

Managing Climbing Sites

Recreational resources (e.g., parks, rock cliffs) are facing pressure from an increasing number of recreational users. Understanding place meanings (Kruger, 2006) and place attachment (Kyle et al., 2004c) provides important insight for resource managers that they can use to make practical decisions. Four recommendations are suggested for climbing site managers based on the results of this study.

Recommendations for outdoor climbing site management.

Table 6.2

Outdoor Climbing Site Management Recommendations

	Recommendation	Validation
1.	Protect sites and routes from over use and over development.	Consideration for and protection of place meanings.
2.	Embrace climbing ideals.	Desired climbing experiences and outcomes.
3.	Create communal areas.	Enable a positively perceived and desired climbing community interaction.
4.	Foster place identity.	Place identity, climbing identity and site marketing.

Recommendation one is to "protect sites and routes from over use and over development." Resource managers should minimize the negative impacts that occur with over use while understanding the importance of the sites and routes to the climbers' identities and to specific place identities. The site attributes theme and the accessibility theme (Table 6.1) signify that specific features including meeting space, parking, and approaches to the climbing site can be used to effectively manage user (i.e., climbers and other recreationists) numbers, environmental and social impacts and perceptions of solitude or naturalness.

Recommendation two is for resource managers to "embrace climbing ideals." Specifically, resource managers do not need to undertake a multitude of "site hardening" measures to facilitate rock climbing. Escape, remoteness, experience seeking, and discovery are desirable components within the climbers' interactions with the climbing sites. Furthermore, they could capitalize on the

desire of climbers for escape, restorative experiences, exploration, and nature appreciation. Managers can do this by marketing and managing sites to facilitate these outcomes. Furthermore, managers need to be cognizant of the behaviours and desires of other recreationists who use the spaces adjacent to the climbing sites.

The third recommendation is to "create communal areas." For resource managers to provide the ultimate climbing related experience, they should seek to offer locations of solitude and nature appreciation and locations for socialization in the "built facilities" of their management areas. For example, communal cook areas and fire pits in campgrounds were found to offer rock climbers opportunities to interact with each other in a socially supportive environment where food, stories, and knowledge could be exchanged.

Finally, resource management should "foster place identity" and intimate connections to outdoor climbing sites. Climbing is a balance of consumption and supporting or giving back to the climbing community (Halbert, 2010). For example, some climbers enjoyed opportunities to contribute to the broad climbing community (e.g., establishing new routes) or to the site (e.g., trail maintenance). These activities help to foster a connection to and ownership of the climbing site and establish social bonding, belongingness, and rootedness along with place identity. Furthermore, the interviewees focused on an outdoor consumption of place. They were direct and knowledgeable about which routes, problems, and sites they would like to consume and how the resultant consumption would influence their climbing identity. Consumption of climbing places combines the

tourism and socio-cultural aspects of climbing. Resources managers should aim to be mindful of site carrying capacity as they seek to attract the global climbing community to specific routes and sites to which the climbing community and the climber can identify.

Recommendations for indoor climbing site management.

Table 6.3

Indoor Climbing Site Management Recommendations

	Recommendation	Validation
1.	Recognize that functionality is more important than mimicking naturalness.	Climbing is core of the activity.
2.	Create routes which are innovative, challenging and facilitate natural bodily movements.	Routes and problems are the focus.
3.	Consciously plan the physical layout of the facility.	Facility is a multipurpose space.
4.	Manage crowding.	Crowding affect function of the space.
5.	Encourage a supportive and engaging climbing community.	Supportive community.

The first recommendation for indoor climbing site managers is to "recognize that functionality is more important than mimicking naturalness." The interviewees desired sites that were appropriate for skill development, physical fitness, and socialization. Their focus was on rock climbing and features that permitted climbing. Within the indoor climbing facilities, the function of the space, including routes/problems, textures, natural lighting, and airflow are important. The indoor facility does not need to be a realistic representation of the natural rock but it does need to be functional for climbing to occur.

The second recommendation is for site managers to encourage route setters to "create routes which are innovative, challenging, and facilitate natural bodily movements." Generally, interviewees appreciated when new routes were offered at the climbing facilities. However, they also valued the opportunity to climb routes that were created for climbing competitions to test their skills. Managers need to find a balance between offering new routes/problems and keeping established routes. Furthermore, routes and problems need to be managed to confirm they are usable, relevant, and constantly marked on the climbing walls.

Recommendation three suggests that management should "consciously plan the physical layout of the facility to encourage social interactions" which can offer the restorative experiences climbers desire. Interviewees explained how they used rock climbing as a means of escaping everyday stressors and the climbing facility can meet those needs through layout designs (e.g., comfortable seating). Furthermore, the physical layout of the facility should not isolate climbers, because indoor climbers tended to seek social interactions. For example, communal areas such as comfortable viewing furniture and warm-up spaces were important. However, the interviewees did appreciate beginner and advanced climbing sections.

The fourth recommendation is "manage crowding" at the indoor facility. While the interviewees comprehended the commercial operation of the facilities they were sometimes deterred or inconvenienced by birthday parties and other large groups. Some consideration surrounding user flows within the facility could

minimize user conflict. For example, routes and problems of different skill levels can be located in different places throughout the facility to prevent crowding.

Finally, the fifth recommendation is to "encourage a supportive and engaging climbing community" through considerate, active, and engaging management. The employees at a climbing facility have a dramatic impact on the flow and atmosphere. For example, through positive reinforcement and detailed explanations, rules can be communicated and the social aspects of climbing can be embraced.

Recommendations to Climbers about Place Experiences

Table 6.4

Recommendations to climbers

	Recommendation	Validation
1.	Practice conscientious climbing.	Social interactions positively and negatively influence everyone's climbing experience.
2.	Share an appreciation of indoor and outdoor climbing places.	The route of climbing behaviour.
3.	Engage in pro-environmental behaviours.	Permits escape and exploration.

The first recommendation for rock climbers is to "practice conscientious climbing." Social interactions that occur in climbing sites positively and negatively influence the climbing experience of everyone at the site. Therefore, a major component of climbing experience is to consider the desires of others and how your behaviour impacts the surroundings site users.

The second recommendation is for climbers to "share an appreciation of indoor and outdoor climbing places." A component of place meaning within the

current study focused on creating a sense of community through shared action and engagement. For example, trail maintenance activities and social support reflect the values of climbing and create an involved community that appreciates the climbing spaces and progresses the sport and climbing sites. It is also important to note the importance of sharing stories and experiences amongst climbers because that tends to contribute to the place meanings and lore surrounding the climbing meccas and star rated climbs.

Finally, climbers should "engage in pro-environmental behaviours" because rock climbing is a consumptive activity which impacts the climbing settings. Pro-environmental behaviour or site stewardship which is considerate of the impacts by climbers and protection/conservation of the site provide space for escape (e.g., solitude) and exploration.

Reflections on Methodology

This research was conducted as an interpretive inquiry using semi-structured interviews. The interpretive inquiry methodology was appropriate because it permitted the interview guide and interviewer to evolve throughout the research process. This section presents methodological insights gained upon reflection at the conclusion of the research.

Limitations

Geographic distribution.

The widespread geographic distribution of the interviewees was a limitation in the research process. As a result, the internet program Skype was

used to conduct interviews with climbers not residing in Edmonton, Alberta. However, Skype is not always reliable as the audio quality was at times below an optimal level. In addition some interviewees did not want to conduct the interview while using the video function; therefore a face-to-face interview was not conducted in these cases.

Research Questions and Narrative Responses

Semi-structured interviews were utilized to collect narratives about memorable climbing experiences, climbing places, and climbing trips. While the interviewees provided a plethora of information about outdoor and indoor rock climbing, further refinement of the research instrument would help to focus the interviews in future research.

Focus of questions changed.

The original research proposal was situated within the rock climbing niche activity of bouldering. Bouldering is an interesting area of research because a gap exists surrounding place research and participant behaviours of individuals who boulder indoors and outdoors. However, a limitation of this research included the lack of individuals who were primarily boulderers within the province of Alberta. A concerted effort was made to find these individuals, however, the recruitment methods and interview process revealed that a majority of rock climbers in western Canada practice many forms of rock climbing (e.g., bouldering, sport climbing, and traditional climbing) while often specializing in trad climbing. This is inconsistent with Heywood (1994) and Kiewa (2002) who found that trad climbing was perceived as the only worthy activity of climbers. The current study

was well structured to reflect this western Canadian climbing demographic through applied methods, the data collected, the particulars of western Canadian rock climbers, and adjustment of the interview questions. Furthermore, interviewees discussed and referred to all types of rock climbing.

Extra interview prompts.

This study would have benefited from extra interview prompts from the place meaning and place attachment literature. For example, a question about how the interviewees perceived their climbing style related to the places they discussed could uncover more about place identity. Place affect could be explored by asking the interviewees "What emotions do you experience in this specific place?" Finally, while interviewees included aspects of belongingness and rootedness to their climbing places, the current study did not contain a specific question which explored their knowledge and connection to the historical roots of the climbing sites. This question could ask "How did you become introduced to this climbing site?"

Future Research

The research presented within this dissertation explored the place meanings held by a group of 21 rock climbers from western Canada and in addition to continuing the research with a different sample of participants from geographically diverse regions, a number of future research and methodological options should be considered. While various theoretical and conceptual

perspectives have been presented within the discussion about scholarly insights, this section covers specific options for place meaning and rock climbing research.

Research Questions

After reflecting on the current study, it is apparent that a number of different questions can be used to guide future research about place meaning and rock climbing. First, many outdoor rock climbing sites are located within larger parks and areas that support multiple recreational activities. Therefore, future research about place meaning and place attachment should investigate how meanings and attachments vary across users involved in different activities within the same or adjacent sites. Specifically, "What place meanings exist between participants involved in different activities at the same site?" This question is relevant for sites where hikers and rock climbers interact such as the cliffs at Lake Louise, Alberta, where hiking tourists walk past the base of the rock climbs. Previous research has identified that place meanings and place attachment can inform resource managers as to desired experiences and place relationships. This is particularly relevant where multiple groups are forming place meanings about sites of limited resources (e.g., cliff faces for climbing and bird watching) and where user conflict may occur.

Secondly, more insight is needed regarding the place meaning and place attachment of climbers in all climbing sites (e.g, bouldering, sport, and trad climbing sites). Such insight has implications for the travel patterns of these specific tourists and the sustainability of existing climbing destinations. Specifically, "What place meanings influence traveling rock climbers' travel

motivations and behaviours?" and "What meanings are ascribed to climbing sites by traveling climbers versus local climbers?" Research about one influential site or route may lead to interesting insights into place meaning and cultural influencers about that site or route and into general climbing place meanings.

Third, outdoor rock climbing occurs on many different surfaces and in many different locations. While participants in this study desired to climb at outdoor sites, it is interesting to note that many outdoor artificial climbing structures are being created in different settings (see Figure 1.1: Climbing Site Continuum). Some climbing structures are being developed in locations which are not perceived as climbing destinations, for example Winnipeg, Manitoba, has a winter ice climbing tower and the 37 metre Excalibur Tower was built Holland (James, 2009). Therefore, research should investigate "What meanings are ascribed to outdoor artificial climbing sites in non-traditional climbing areas?" This will help to develop a better understanding of how climbers are interacting with the different climbing sites (e.g., urban, forested, parkland) and will help to understand natural versus artificial climbing surfaces.

Finally, indoor climbing facilities continue to be developed and to evolve as sites where climbers congregate. However, it is interesting to note that interviewees' saw themselves patronizing these sites because they were dependent on them rather than because they identified with them. Two questions emerged upon reflection of the indoor climbing narratives from the current study: "What place meanings are shared amongst climbers when their site of strong place

dependence (i.e., the indoor facility) is threatened with closure?" and "What place meanings are applied to indoor climbing facilities in climbing destinations?"

Research Methods

The current study was conducted as an interpretive inquiry (Ellis, 2006; Schwandt, 2001) and provided a detailed descriptive map (Markula & Silk, 2011) of climbing place meanings. Future research on place meaning, attachment, and rock climbing can apply other research methods and methodologies to expand the scope of this research.

Interviews in the current study required the participants to reflect upon their previous experiences at rock climbing sites. Future research in which participants completed a climbing diary would provide insight into the research questions and provide more time specific data for analysis. Furthermore, a diary could contain longitudinal narratives and reflections about specific sites or climbing in general. This is not difficult to apply to research practice because rock climbers and mountaineers training to become adventure guides typically keep diaries of their climbing experiences. These diaries could provide practical insight into the cognitions, affect, and behaviours of climbers who are viewing sites from a leadership position. Similarly, photographic journals or photo-elicitation could also be used to provide insight into place meaning. Simply, interviewees could bring images of their favourite climbing sites or they could be provided with a camera to collect relevant place images.

The study used semi-structured interviews and interview prompts to obtain responses from interview participants. However, focus groups would provide a

constructive and supportive interviewing environment for participants to discuss rock climbing and place meanings. Furthermore, a focus group might be able to isolate the discussion surrounding specific climbing locations (e.g., Squamish, British Columbia) and or facilities (e.g., gyms).

Finally, some interviewees invited me to accompany them into the gym or to join their climbing trips. I did not accept these offers. However climbing with participants could expand our understanding of climbing and place meaning. Through participant observation and or ethnographies, the researcher would be provided with additional insight into the formation of place meaning and the interactions between climber and climbing sites.

Conclusion

Prior to commencing my doctoral research a portion of my life was linked to my identity as a rock climber. At the conclusion of the current study it is helpful for me to reflect on my personal climbing frame of reference as it parallels this research. In considering reflexivity and the methodology of this research, I believe that my background in rock climbing permitted a deeper understanding of the interviewees' narratives and climbing terminology. My background also helped to establish a connection with the interviewees that was felt beyond the researcher and interviewee relationship wherein I was genuinely interested in their experiences.

Some place meanings that emerged in this study are consistent with my previous experiences as a rock climber. These are captured within the outdoor

physical and experiential dimensions as well as the indoor physical site and activity focused dimensions and the indoor themes of and outdoor themes of desires and loyalty. Similar to the interviewees, I found outdoor and indoor climbing sites to be a source of the restorative effects of recreation and sites of dependence. However, in recent years in which I attempted to restart my climbing activities, I did not find climbing gyms to be as inclusive as they once seemed, nor as inclusive as the interviewees suggested. I did, however, find that the interviewees' descriptions of the climbing community were consistent with my experience "once one belongs."

The academic literature has suggested that climbers can be placed into specific classifications (e.g., sport, trad, and boulder) where the goal, the desire, and requirement is to become a traditional rock climber. This view was not supported by my study. The interviewees saw traditional climbing as just one climbing option through which a broad range of places can be experienced. These views are consistent with my own experiences.

This research has also revealed the proliferation of indoor climbing options which were not available when I was an avid climber. These new sites appeal to me because they present new places of exploration. Finally, the interviewees presented extended climbing-based travel as an important part of climbing, much more so than my personal experiences would have predicted. The interviewees were avid climbing tourists.

Reflection on the Binaries within the Research

The dissertation began with a discussion of space compared to place and then continued with the distinctions and comparisons of outdoor versus indoor and natural as contrasted with artificial. Acknowledgement of the binaries within this dissertation is important because the researcher and the interviewees often used the terms in a comparative sense. It is, however recognized that these relationships are more complex and nuanced than the binary suggests. This complexity is illustrated in Figure 1.1 which depicts a climbing site continuum where in the description of each setting is presented in variations along a scale. For example, the idea of a simple natural/artificial binary is challenged when we considered that rock climbers seldom climb on an unmodified cliff; the cliff is usually "cleaned" of mosses, lichens and other debris (e.g., dirt). Nevertheless, the "cleaned" rock is comparatively "natural" when set against the colourful holds on a vibrantly painted indoor climbing wall.

Closing Remarks: Reflection on Research Questions

Interviews were conducted with avid rock climbers who provided insight into the research question "What transforms a climbing space into climbing place?" through their outdoor and indoor rock climbing narratives. Analysis of the interview transcripts was focused on answering two sub-questions which confirmed that the outdoor and indoor climbing settings were defined by some similarities and dramatic differences in the place meanings.

Sub-question one was "What meanings are ascribed to outdoor climbing sites?" It was discovered that place meanings of the outdoor climbing sites

included the interrelationship of three dimensions (physical, social, and experiential) which contained the meanings which exemplified the interviewees' (rock climbers) place interactions. The meanings for outdoor climbing places described a place which was meaningful for its physical features which permitted the desired climbing experiences and social interactions to occur. These place meanings were prominent in the outdoor narratives and allude to characteristics of place attachment.

The second sub-question was "What meanings are ascribed to indoor climbing sites?" By unpacking the interviewees' perceptions of indoor climbing experiences and behaviours it became clear that the interviewees' meanings for indoor climbing sites could be grouped into three dimensions (physical, experiential, and activity focused). Indoor climbing sites were meaningful places where place meanings highlighted unique physical characteristics and behaviours (e.g., as a distinct sport) and where use resulted in and was guided by specific desires and outcomes (e.g., socialization and physical fitness).

This dissertation has explored the place meanings of two distinct settings (i.e., outdoor and indoor) through the activity of rock climbing. While the activity of rock climbing outdoors is not identical to its indoor counterpart, the act of climbing requires a similar skill set and physical fitness. The similarities and differences help to establish the understanding that the place meanings of the interviewees were situated in distinct outdoor and indoor settings. Therefore, the place, outdoor or indoor, is influential in that the specific nuances of the place meanings that are applied to certain sites and settings. Furthermore, the slight

variations between the activities of outdoor and indoor climbing also influenced the place meanings that the interviewees held for specific sites and settings. The "reciprocal arrangement" between climbers and their climbing site was also noted by McCarthy (2002, p. 183). In summary, the activity of rock climbing influences the interviewees' perceptions of place and the place influences the nature of the activity.

Whether outdoor or indoor, the meanings of these places define the climbing sites for the interviewees. Therefore, to conclude the main research argument within this dissertation, a climbing space transforms from a climbing site into a climbing place through the multiple place meanings that the rock climbers construct and negotiate as they practice the activity of climbing.

References

Alexandris, K. (2006). Increasing customers' loyalty in a skiing resort: The contribution of place attachment and service quality. *International Journal of Contemporary Hospitality Management*, 18(5), 414-425. doi:10.1108/09596110610673547

Angen, M. J. (2000). Evaluating interpretive inquiry: Reviewing the validity debate and opening the dialogue. *Qualitative Health Research*, 10(3), 378-395. doi:10.1177/104973230001000308

Asci, F. H., Demirhan, G., & Dinc, S. C. (2006). Psychological profile of Turkish rock climbers: An examination of climbing experience and route difficulty. *Perceptual and Motor Skills*, 104, 892-900. doi:10.2466/pms.104.3.892-900

Attarian, A. (1991). An investigation of the ecological and social impacts caused by rock climbers. *Proceedings of the 1991 International Conference on Outdoor Recreation (October 17-19, 1991, Moscow, Idaho).* Retrieved from http://eric.ed.gov/ERICDocs/data/ericdocs2sql/content_storage_01/0000019b/80/15/a0/eb.pdf

Attarian, A. (1999). Artificial climbing environments. In J.C. Miles, & S. Priest (Eds.), *Adventure programming* (pp.341-345). State College: Venture Publishing, Inc.

Attarian, A. (2003). Managing groups at climbing sites. In R. Poff, S. Guthrie, J. Kafsky-DeGarmo, T. Stenger, & W. Taylor (Eds.), *Proceedings of the 16th International Conference on Outdoor Recreation and Education* (pp.

20-26). Bloomington, IL: Association of Outdoor Recreation and Education. Retrieved from http://www.aore.org/ICOREProceedings2002.pdf

Attarian, A. (2005, March 21). Survey of rock climbing in the Grandfather Mountain Corridor, Blue Ridge Parkway, North Carolina. Retrieved from http://www.ncbouldering.com/BCC/GMC_Survey.pdf

Bale, J. (1988). The place of 'place' in cultural studies of sports. *Progress in Human Geography*, 12, 507-524. doi:10.1177/030913258801200403

Bale, J. (2003). *Sport geography* (2nd Ed.). New York: Routledge.

Bale, J., & Vertinsky, P. (2004). Introduction. In P. Vertinsky & J. Bale (Eds.), *Sites of sport space, place, experience* (pp. 1-7). London: Routledge.

Barbour, R. S., & Schostak, J. (2005). Interviewing and focus groups. In B. Somekh & C. Lewin (Eds.), *Research methods in the social sciences* (pp. 41-48). London: Sage Publications.

Barnes, M., Forrester, S., Leone, M. (2013). A city looks to its past to discover its future: A retrospective case study examining the evolution of an artificial white-water river development. *Managing Leisure*, 18(1), 16-30. doi: 10.1080/13606719.2012.742223

Baudrillard, J. (1981/2001). Simulacra and simulations. In M. Poster (Ed.), *Jean Baudrillard selected readings* (pp. 169-187). Stanford, CA: Stanford University Press. (Reprinted from *Simulacra and Simulations*, pp. 1-13, 23-49, by P. Foss, P. Patton, & P. Beitchman (Trans.), 1983, New York, NY: Semiotext(e))

Beard, E. (2011). Climbing the walls. *Parks & Recreation*, 46(4), 18-19.

Blake, K .S. (2002). Colorado Fourteeners and the nature of place identity. *Geographical Review*, 92(2), p.155-180.

Boostrom, R. (1994). Learning to pay attention. *Qualitative Studies in Education*, 7(1), 51-64. doi:10.1080/0951839940070104

Borrie, W. T., & Harding, J. A. (2002). *Effective recreation visitor communication strategies: Rock climbers in the Bitterroot Valley, Montana* (RMRS-RN-15). Rocky Mountain Research Station: United States Department of Agriculture/Forest Service. Retrieved from http://www.fs.fed.us/rm/pubs/rmrs_rn015.pdf

Bowen, G. A. (2008). Naturalistic inquiry and the saturation concept: a research note. *Qualitative Research*, 8(1), 137-152. doi:10.1177/1468794107085301

Boyd, J., & Munroe, K. J. (2003). The use of imagery in climbing. *Athletic Insight*, 5(2), 15-30. Retrieved from http://www.athleticinsight.com

Brehm, J. M. (2007). Community attachment: The complexity and consequence of the natural environment facet. *Human Ecology*, 35, 477-488. doi:10.1007/s10745-006-9104-3

Bricker, K. S., & Kerstetter, D. L. (2000). Level of specialization and place attachment: An exploratory study of whitewater recreationists. *Leisure Sciences*, 22(4), 233-257. doi:10.1080/01490409950202285

Brooks, J. J., Wallace, G. N., & Williams, D. R. (2006). Place as relationship partner: An alternative metaphor for understanding the quality of visitor

experience in a backcountry setting. *Leisure Sciences*, 28, 331-349. doi:10.1080/01490400600745852

Brymer, E., Downey, G., & Gray, T. (2009). Extreme sports as a precursor to environmental sustainability. *Journal of Sport & Tourism*, 14(2), 193-204. doi:10.1080/14775080902965223

Brymer, E., & Gray, T. (2010). Developing an intimate "relationship" with nature through extreme sports participation. *Leisure/Loisir*, 34(3), 361-374. doi:10.1080/14927713.2010.542888

Budruk, M., Stanis, S. A. W., Schneider, I. E., & Heisey, J. J. (2008). Crowding and experience-use history: A study of the moderating effect of place attachment among water-based recreationists. *Environmental Management*, 41, 528-537. doi:10.1007/s00267-007-9059-1

Burg, J. (2005). School of rock. *Parks & Recreation*, 40, 60-63.

Cailly, L. (2006). Climbing sites as counter-sites? Essay on neo-community forms and territorialisation processes as work in the practice of rock climbing. *Revue de géographie alpine*, 94(3), 35-44. doi: 10.3406/rga.2006.2404

Casey, K. (1996). The new narrative research in education. In M. W. Apple (Ed.), *Review of research in education* (pp. 211-253). Washington: American Educational Research Association.

Creswell, J. W. (2009). *Research design* (3rd ed.). Thousand Oaks, CA: Sage.

Crouch, D. (2000). Places around us: Embodied lay geographies in leisure and tourism. *Leisure Studies*, 19(2), 63-76. doi:10.1080/026143600374752

Davenport, M. A., Baker, M. L., Leahy, J. E., & Anderson, D. H. (2010).

Exploring multiple place meanings at an Illinois State Park. *Journal of Park and Recreation Administration*, 28(1), 52-69.

de Geus, B., O'Driscoll, S. V., & Meeusen, R. (2006). Influence of climbing style on physiological responses during indoor rock climbing on routes with the same difficulty. *European Journal of Applied Physiology*, 98, 489-496.

de Léséleuc, E. (2004). Rock climbing and territory: Symbolic processes in the appropriation of a public space. *Revue de géographie alpine*, 92(4), 95-103. doi:10.3406/rga.2004.4665

de Léséleuc, E., Gleyse, J., & Marcellini, A. (2002). The practice of sport as political expression? Rock climbing at Claret France. *International Sociology*, 17(1), 73-90. doi:10.1177/0268580902017001004

Denzin, N. K., & Lincoln, Y. S. (1994). Entering the field of qualitative research. In N. K. Denzin & Y. S. Lincoln (Eds.), *Handbook of qualitative research* (pp. 1-17). Thousand Oaks: Sage Publications.

Dixon, J., & Durrheim, K. (2000). Displacing place-identity: A discursive approach to locating self and other. *British Journal of Social Psychology*, 39, 27-44. doi:10.1348/014466600164318

Donnelly, P. (2004). Playing with gravity: Mountains and mountaineering. In P. Vertinsky, & J. Bale (Eds.), *Sites of sport: Space, place, experience* (pp. 131-144). New York: Routledge.

Dupuis, S. L. (1999). Naked truths: Towards a reflexive methodology in leisure research. *Leisure Sciences*, 21, 43-64. doi:10.1080/014904099273282

Dustin, D. L., Schneider, I. E., McAvoy, L. H., & Frakt, A. N. (2002). Cross-

cultural claims on Devils Tower National Monument: A case study. *Leisure Studies*, 24, 79-88. doi:10.1080/01490400252772845

Eden, S., & Barratt, P. (2010). Outdoors versus indoors? Angling ponds, climbing walls and changing expectations of environmental leisure. *Area*, 42(2), 487-493. doi:10.1111/j.1475-4762.2010.00943.x

Eisenhauer, B. W., Krannich, R. S., & Blahna, D. J. (2000). Attachments to special places on public lands: An analysis of activities, reason for attachments, and community connections. *Society & Natural Resources*, 13, 421-441. doi: 10.1080/089419200403848

Ellis, J. (1998). Interpretive inquiry as a formal research process. In J. Ellis (Ed.), *Teaching from understanding teacher as interpretive inquirer* (pp. 15-32). New York: Garland Publishing, Inc.

Ellis, J. (2006). Researching children's experience hermeneutically and holistically. *The Alberta Journal of Educational Research*, 52(3), 111-126.

Feher, P., Meyers, M. C., & Skelly, W. A. (1998). Psychological profile of rock climbers: State and trait attributes. *Journal of Sport Behavior*, 21(2), 167-180.

Fishwick, L., & Vining, J. (1992). Toward a phenomenology of recreation place. *Journal of Environmental Psychology*, 12, 57-63. doi:10.1016/S0272-4944(05)80297-X,

Fix, P., Loomis, J., & Eichhorn, R. (2000). Endogenously chosen travel costs and the travel cost model: An application to mountain biking at Moab, Utah. *Applied Economics*, 32(10), 1227-1231. doi:10.1080/000368400404371.

Farnum, J., Hall, T., & Kruger, L. E. (2005). *Sense of place in natural resource recreation and tourism: an evaluation and assessment of research findings* (Gen. Tech. Rep. PNW-GTR-660). Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station. Retrieved from http://www.fs.fed.us/pnw/pubs/pnw_gtr660.pdf

Fleming, R. K., & Hörst, E. J. (2010). Behavior analysis and sports climbing. *Journal of Behavioral Health and Medicine*, 1, 143-154.

Forrester, S., & Beggs, B. A. (2001). An exploratory analysis of the leisure experience of individuals in a simulated golf environment. *Illuminare*, 7(1), 39-55.

Frauman, E., & Clevenger, B. (2010). An examination of sensation seeking tendencies among boulderers. *Journal of Outdoor Recreation, Education, and Leadership*, 2(2), 29-33.

Freischlag, J., & Freischlag, T. (1993). Selected psycho-social, physical, and technical factors among rock climbers: A test of the Flow Paradigm. In W. K. Simpson, A. D. LeUnes, & J. S. Picou (Eds.), *Applied research in coaching and athletics annual* (pp.109-122). Boston: American Press.

Gaffney, C., & Bale, J. (2004). Sensing the stadium. In P. Vertinsky & J. Bale (Eds.), *Sites of sport space, place, experience* (pp. 25-38). London: Routledge.

Gephart, R. P. (2004). Qualitative research and the Academy of Management Journal. *Academy of Management Journal*, 47(4), 454-462. doi:10.5465/AMJ.2004.14438580

Gibbons, S., & Ruddell, E.J. (2009). The effect of goal orientation and place dependence on select goal interferences among winter backcountry users. *Leisure Sciences*, 17(3), 171-183. doi:10.1080/01490409509513255

Gibbs, G. (2007). *Analyzing Qualitative Data*. London: SAGE Publications Ltd.

Gibson, H. J. (1998). Sport tourism: a critical analysis of research. *Sport Management Review*, 1(1), 45-76. Available online 30 July 2008. doi:10.1016/S1441-3523(98)70099-3

Gibson, H. J., Willming, C., & Holdnak, A. (2003). Small-scale event sport tourism: fans as tourists. *Tourism Management,* 24, 181-190. doi:10.1016/S0261-5177(02)00058-4

Giuliani, M. V. (2003). Theory of attachment and place attachment. In M. Bonnes, T. Lee, & M. Bonaiuto (Eds.), *Psychological theories for environmental issues* (137-170). England: Ashgate Publishing Company.

Glendinning, M. (2005, May12). Up the wall. *The Economist.* Retrieved from http://www.economist.com/node/3909004/print

Graydon, D., & Hanson, K. (1997). Appendix A: Rating Systems. In D. Graydon & K. Hanson (Eds.), *Mountaineering: The freedom of the hills* (6th ed., pp. 510-516). Seattle: The Mountaineers.

Grijalva, T. C., & Berrens, R. P. (2003). A question of standing: Institutional change and rock climbing in wilderness areas. *Society and Natural Resources*, 16, 239-247. doi: 10.1080/08941920309162

Gripped.com. (n.d.). Cuba bans rock climbing. Retrieved from http://gripped.com/2012/02/sections/news/cuba-bans-rock-climbing/

Guba, E. G., & Lincoln, Y. S. (1994). Competing paradigms in qualitative research. In N. K. Denzin & Y. S. Lincoln (Eds.), *Handbook of qualitative research* (pp. 105-117). Thousand Oaks: Sage Publications.

Gunderson, K., & Watson, A. (2007). Understanding place meaning on the Bitterroot National Forest, Montana. *Society and Natural Resources*, 20, 705-721. doi:10.1080/08941920701420154

Halbert, D. (2010). From route finding to redpointing: Climbing culture as a gift economy. In S. E. Schmid (Ed.), *Climbing philosophy for everyone* (pp. 183-194). United Kingdom: Wiley-Blackwell.

Halpenny, E. (2010). Pro-environmental behaviours and park visitors: The effect of place attachment. *Journal of Environmental Psychology*, 30(4), 409-421. doi: 10.1016/j.jenvp.2010.04.006

Hamilton, L. C. (1979). Modern American rock climbing: Some aspects of social change. *The Pacific Sociological Review*, 22(3), 285-308. Retrieved from http://www.jstor.org/stable/1388760

Hammitt, W. E., Backlund, E. A., & Bixler, R. D. (2004). Experience use history, place bonding and resource substitution of trout anglers during recreation engagements. *Journal of Leisure Research*, 36(3), 356-378.

Hammitt, W. E., Backlund, E. A., & Bixler, R. D. (2006). Place bonding for recreation places: Conceptual and empirical development. *Leisure Studies*, 25(1), 17-41. doi: 10.1080/02614360500098100

Hammitt, W. E., Kyle, G. T., & Oh, C. (2009). Comparison of place bonding

models in recreation resource management. *Journal of Leisure Research*, 41(1), 57-72.

Hanley, N., Write, R. E., & Koop, G. (2002). Modelling recreation demand using choice experiments: Climbing in Scotland. *Environmental and Resource Economics*, 22, 449-466. doi:10.1023/A:1016077425039

Hay, R. (1998). Sense of place in developmental context. *Journal of Environmental Psychology*, 18, 5-29. doi:10.1006/jevp.1997.0060

Heywood, I. (1994). Urgent dreams: Climbing, rationalization and ambivalence. *Leisure Studies*, 13(3), 179-194. doi:10.1080/02614369400390131

Heywood, I. (2006). Climbing monsters: Excess and restraint in contemporary rock climbing. *Leisure Studies*, 25(4), 455-467. doi:10.1080/02614360500333911

Hidalgo, M. C., & Hernandez, B. (2001). Place attachment: Conceptual and empirical questions. *Journal of Environmental Psychology*, 21, 273-281. doi:10.1006/jevp.2001.0221

Hillary, E. (1999). *View from the summit: The remarkable memoir by the first person to conquer Everest*. New York: Pocket Books.

Hollinshead, K. (2004). Ontological craft in tourism studies: The productive mapping of identity and image in tourism settings. In J. Phillimore & L. Goodson (Eds.), *Qualitative research in tourism ontologies, epistemologies and methodologies* (pp. 83-101). New York: Routledge.

Hutson, G., & Montgomery, D. (2010). Stakeholder views of place meanings

along the Niagara Escarpment: An exploratory Q methodological inquiry. *Leisure/Loisir*, 34(4), 421-442. doi:10.1080/14927713.2010.544121

Hyder, M. A. (1999). Have your students climbing the walls: The growth of indoor climbing. *Journal of Physical Education, Recreation & Dance*, 70(9), 32-39.

James, A. (2009, May). In the Dutch Mountains. Retrieved from http://www.ukclimbing.com/articles/page.php?id=1827

Jorgensen, B. S., & Stedman, R. C. (2001). Sense of place as an attitude: Lakeshore owners attitudes toward their properties. *Journal of Environmental Psychology*, 21, 233-248. doi:10.1006/jevp.2001.0226

Kaltenborn, B. P., & Williams, D. R. (2002). The meaning of place: Attachments to Femundsmarka National Park, Norway, among tourists and locals. *Norwegian Journal of Geography*, 56(3), 189-198.

Karlsen, G. (2010). The beauty of a climb. In S. E. Schmid (Ed.), *Climbing philosophy for everyone* (pp. 219-229). United Kingdom: Wiley-Blackwell.

Kellett, P., & Russell, R. (2009). A comparison between mainstream and action sport industries in Australia: A case study of the skateboarding cluster. *Sport Management Review*, 12, 66-78. doi:10.1016/j.smr.2008.12.003

Kiewa, J. (2002). Traditional climbing: Metaphor of resistance or metanarrative of oppression? *Leisure Studies*, 21(2), 145-161. doi:10.1080/02614360210158605

Kim, H., & Jamal, T. (2007). Touristic quest for existential authenticity. *Annals of*

Tourism Research, 34(1), 181-201. doi:10.1016/j.annals.2006.07.009

Kjellgren, A., & Buhrkall, H. (2010). A comparison of the restorative effect of a natural environment with that of a simulated natural environment. *Journal of Environmental Psychology*, 30. doi:10.1016/j.jenvp.2010.01.011

Klauser, A., Bodner, G., Frauscher, F., Gabl, M., & Zur Nedden, D. (1999). Finger injuries in extreme rock climbers: Assessment of high-resolution ultrasonography. *American Journal of Sports Medicine*, 27, 733-737.

Knez, I. (2005). Attachment and identity as related to a place and its perceived climate. *Journal of Environmental Psychology*, 25, 207-218. doi:10.1016/j.jenvp.2005.03.003

Korpela, K., & Hartig, T. (1996). Restorative qualities of favourite places. *Journal of Environmental Psychology*, 16, 221-233. doi:10.1006/jevp.1996.0018

Korpela, K. M., Hartig, T., Kaiser, F. G., & Fuhrer, U. (2001). Restorative experience and self-regulation in favorite places. *Environment and Behaviour*, 33(4), 572-589. doi:10.1177/00139160121973133

Kruger, L. E. (2006). Recreation as a path for place making and community building. *Leisure/Loisir*, 30(2), 383-391. doi:10.1080/14927713.2006.9651359

Kulczycki, C. & Lück, M. (2009). Chapter 10: Outdoor adventure tourism and Wellness. In R. Bushell, & P. Sheldon (Eds.), *Wellness and tourism: Nurturing mind, body, spirit* (pp. 165-176). Elmsford, NY: Cognizant Communication Corp.

Kural, R. (2010). Changing spaces for sports. *Sport in Society,* 13(2), 300-313. doi:10.1080/17430430903523002

Kvale, S. (2007). *Doing Interviews*. London: Sage Publications Ltd.

Kyle, G., Bricker, K., Graefe, A., Manning, R. & Wickham, T. (2004b). An examination of recreationists' relationships with activities and settings. *Leisure Sciences,* 26(2), 123-142. doi:10.1080/01490400490432019

Kyle, G., Bricker, K., Graefe, A., & Wickham, T. (2004a). An examination of recreationists' relationships with activities and settings. *Leisure Sciences*, 26, 123-142. doi:10.1080/01490400490432019

Kyle, G., & Chick, G. (2007). The social construction of a sense of place. *Leisure Sciences,* 29(3), 209-225. doi:10.1080/01490400701257922

Kyle, G., Graefe, A., & Manning, R. (2004c). Attached recreationists . . . Who are they? *Journal of Park and Recreation Administration,* 22(2), 65-84.

Kyle, G., Graefe, A., & Manning, R. (2005). Testing the dimensionality of place attachment in recreational settings. *Environment and Behavior,* 37(2), 153-177. doi:10.1177/0013916504269654

Kyle, G., Graefe, A., Manning, R., & Bacon, J. (2003). An examination of the relationship between leisure activity involvement and place attachment among hikers along the Appalachian Trail. *Journal of Leisure Research*, 35(3), 249-273.

Leitch, C. M., Hill, F. M., & Harrison, R. T. (2010). The philosophy and practice

of interpretivist research in entrepreneurship: Quality, validation, and trust. *Organizational Research Methods*, 13(1), 67-84. doi:10.1177/1094428109339839

Levey, B. (2010). It ain't fast food: An authentic climbing experience. In S. E. Schmid (Ed.), *Climbing philosophy for everyone* (pp. 106-116). United Kingdom: Wiley-Blackwell.

Lew, A. A. (2011). Understanding experiential authenticity through the best tourism places. *Tourism Geographies*, 13(4), 570-575. doi:10.1080/14616688.2011.588245

Lewis, S. P., & Cauthorn, D. (2000). *Climbing: From gym to crag*. Seattle, WA: The Mountaineers Books.

Lin, A. C. (1998). Bridging positivist and interpretivist approaches to qualitative methods. *Policy Studies Journals*, 26(1), 162-180. doi:10.1111/j.1541-0072.1998.tb01931.x

Low, S. M., & Altman, I. (1992). Place attachment: A conceptual inquiry. In I. Altman, & S. M. Low (Eds.), *Place attachment* (pp. 1-12). New York: Plenum Press.

Manning, R. E., & Freimund, W. A. (2004). Use of visual research methods to measure standards of quality for parks and outdoor recreation. *Journal of Leisure Research*, 36(4), 557-579.

Manzo, L. C. (2003). Beyond house and haven: Toward a revisioning of emotional relationships with places. *Journal of Environmental Psychology*, 23, 47-61. doi.org/10.1016/S0272-4944(02)00074-9

Manzo, L. C. (2005). For better or worse: Exploring multiple dimensions of place meaning. *Journal of Environmental Psychology,* 25, 67-86. doi:10.1016/j.jenvp.2005.01.002

Markula, P., & Silk, M. (2011). *Qualitative research for physical culture.* United Kingdom: Palgrave Macmillian.

McAndrew, F. T. (1998). The measurement of 'rootedness' and the prediction of attachment to home-towns in college students. *Journal of Environmental Psychology,* 18(4), 409-417. doi: 10.1006/jevp.1998.0078

McCarthy, J. (2002). A theory of place in North American mountaineering. *Philosophy & Geography*, 5(2), 179-194. doi:10.1080/10903770220152407

MEC. (2013). Bouldering. Retrieved from http://www.mec.ca/AST/ContentPrimary/Learn/Climbing/IntroToClimbing/Bouldering.jsp

Mellor, D. (1997). *Rock climbing*. New York: W.W. Norton & Company.

Merrill, K., & Graefe, A. (1998). The relationship between activity specialization and preferences for setting and route attributes of selected rock climbers. In H. G. Vogelsong (Ed.) *Proceedings of the 1997 Northern Recreation Research Symposium 1997 April 6-9; Bolton Landing, NY* (Gen. Tech. Rep. NE-241, pp. 40-43). Radnor, PA: U.S. Department of Agriculture, Forest Service, Northeastern Forest Experiment Station.

Mittelstaedt, R. (1997). Indoor climbing walls: The sport of the Nineties. *Journal of Physical Education, Recreation & Dance*, 69(9), 26-29.

Monz, C. A., Smith, K. E., & Knickerbocker, L. (2006). Climbers' attitudes toward recreation resource impacts in the Adirondack Park. In J. G. Peden, & R. M. Schuster, (Eds.), *Proceedings of the 2005 Northeastern Recreation Research Symposium; 2005 April 10-12; Bolton Landing, NY* (Gen. Tech. Rep. NE-341, pp.204-211). Newtown Square, Pennsylvania: U.S. Forest Service, Northeastern Research Station.

Moore, R. L., & Graefe, A. R. (1994). Attachments to recreations settings: The case of rail-trail users. *Leisure Sciences,* 16(1), 17-31. doi:10.1080/01490409409513214

Moore, R. L., & Scott, D. (2003). Place attachment and context: Comparing a park and a trail within. *Forest Science,* 49(6), 877-884.

Morgan, D. (1998). Up the wall: The impact of the development of climbing walls on British Rock Climbing. In M. F. Collins & I. S. Cooper (Eds.), *Leisure management issues and applications* (pp. 255-262). New York, NY: CAB International.

Morse, J. M., Barrett, M., Mayan, M., Olson, K., & Spiers, J. (2002). Verification strategies for establishing reliability and validity in qualitative research. *International Journal of Qualitative Methods,* 1(2) [Article 2], 1-19. Retrieved from http://www.ualberta.ca/~ijqm/

Moskwa, E. C. (2012). Exploring place attachment: An underwater perspective. *Tourism in Marine Environments,* 8(1/2), 33-46. doi:10.3727/154427312X13262430524063

Motl, R. W., Berger, B. G., & Leuschen, P. S. (2000). The role of enjoyment in

the exercise-mood relationship. *International Journal of Sport Psychology*, 31, 347-363.

Murdock, E. (2004). Understanding recreation flow to protect wilderness resources at Joshua Tree National Park, California. *Working Papers of the Finish Forest Research Insitute2.* Retrieved from http://www.metla.fi/julkaisut/workingpapers/2004/mwp002-18.pdf

Nettlefold, P. A., & Stratford, E. (1999). The production of climbing landscapes-as-texts. *Australian Geographical Studies*, 37(2), 130-141. doi:10.1111/1467-8470.00074

Niagara Parks. (n.d.). Bouldering. Retrieved from http://www.niagaraparksnature.com/things-to-do/bouldering.html

Nicros. (n.d). Handholds crimps: Lotta Balls. Retrieved from http://shop.nicros.com/index.php/lotta-balls.html

Norman, M. (2006). *Bouldering in the Canadian Rockies* (2nd ed.). Surrey: Rocky Mountain Books.

Ontarioaccesscoalition.com. (2008, September, 22). The Niagara Glen needs your help! *Climbing Magazine*. Retrieved from http://www.climbing.com/news/the-niagara-glen-needs-your-help/

Packer, M. J., & Addison, R. B. (1989). Evaluating an interpretive account. In M. J. Packer & R. B. Addison (Eds.), *Enter the circle: Hermeneutic investigation in psychology* (pp. 275-321). Albany: Sany Press.

Patton, M. Q. (2002). *Qualitative research & evaluation methods* (3rd ed.). Thousand Oaks: Sage Publications.

Phillips, W. J., & Back, K. (2011). Conspicuous consumption applied to a tourism destination. *Journal of Travel & Tourism Marketing*, 28(6), 583-597. doi:10.1080/10548408.2011.603630

Polkinghorne, D. E. (1995). Narrative configuration in qualitative analysis. In J.A. Hatch & R. Wisniewski (Eds.), *Life history and narrative* (pp. 5-23). Washington: Falmer Press.

Proshansky, H. M., Fabian, A. K., & Kaminoff, R. (1983). Place-identity: Physical world socialization of the self. *Journal of Environmental Psychology*, 3, 57-83. doi:10.1016/S0272-4944(83)80021-8

Rabinowitz, E., Frauman, E., Williams, W. (2010). Constraints to rafting at an artificial whitewater park. *Journal of Tourism Insights*, 1(1), 73-79.

Ramsey, W. (2010). Hold manufacturing: Why you may be wrong. In S. E. Schmid (Ed.), *Climbing philosophy for everyone* (pp. 145-157). United Kingdom: Wiley-Blackwell.

Ramshaw, G., & Gammon, S. (2007). More than just nostalgia? Exploring the heritage/sport tourism nexus. In S. Gammon & G. Ramshaw (Eds.), *Heritage, sport tourism: sporting pasts – tourist futures* (pp. 7-21). New York: Routledge.

Ramthun, R., & Blake, A. (2002). Exploring quality standards for New River Gorge climbing sites: Establishing a baseline for the future. In R. Sshuster (Ed.), *Proceedings of the 2002 Northeastern Recreation Research Symposium* (Gen. Tech. Rep. NE-302, pp. 87-89). Newtown Square,

Pennsylvania: U.S. Department of Agriculture, Forest Service, Northeastern Research Station.

Relph, E. (1976). *Place and placelessness.* London: Pion Limited.

Rickly-Boyd, J. M. (2012). Lifestyle climbing: Toward existential authenticity. *Journal of Sport & Tourism*, 17(2), 85-104. doi:10.1080/14775085.2012.729898

Robinson, V. (2008). *Everyday masculinities and extreme sport*. Oxford: Berg.

Rojek, C. (1990). Baudrillard and leisure. *Leisure Studies*, 9(1), 7-20. doi:10.1080/02614369000390021

Rossiter, P. (2007). On humans, nature, and other nonhumans. *Space and Culture*, 10(2), 292-305. doi:10.1177/1206331206298546

Roth, J. (2009, November). Future gyms. *Urban Climber Magazine,* 34, 42-48.

Ryan, S., Voss, R., & Maina, M. (2001). The first step towards a climbing wall: Writing a proposal. *Journal of Physical Education, Recreation & Dance*, 72(7), 32-39.

Salome, L. R., van Bottenburg, M., & van den Heuvel, M. (2012). 'We are as green as possible': Environmental responsibility in commercial artificial settings for lifestyle sports. *Leisure Studies.* doi:10.1080/02614367.2011.645247 [ifirst article]

Samet, M. (2013). Climbing dictionary: 50 terms to know as a climber. Retrieved from http://www.climbing.com/skill/climbing-dictionary/

Sandberg, A. (2003). Play memories and place identity. *Early Child Development and Care*, 173(2), 207-221. doi:10.1080/03004430303091

Sarbin, T. R. (1983). Place identity as a component of self: An addendum. *Journal of Environmental Psychology*, 3, 337-342. doi:10.1016/S0272-4944(83)80036-X

Scannell, L., & Gifford, R. (2010). Defining place attachment: A tripartite organizing framework. *Journal of Environmental Psychology*, 30, 1-10. doi:10.1016/j.jenvp.2009.09.006

Schmid, E. (2010). Climbing glossary. In S. E. Schmid (Ed.), *Climbing philosophy for everyone* (pp. 230-236). United Kingdom: Wiley-Blackwell.

Schöffl, V. (2013). Rock and ice climbing. In O. Mei-Dan & M.R. Carmont (Eds.), *Adventure and extreme sport injuries: Epidemiology, treatment, rehabilitation and prevention* (pp. 7-35). London: Springer. doi:10.1007/978-1-4363-5

Schöffl, V. R., & Kuepper, T. (2006). Injuries at the 2005 World Championships in rock climbing. *Wilderness and Environmental Medicine*, 17, 187-190. doi:10.1580/PR26-05

Schwandt, T. A. (2000). Three epistemological stances for qualitative inquiry. In N. K. Denzin & Y. S. Lincoln (Eds.), *Handbook of qualitative research* (2nd ed., pp. 189-214). Thousand Oaks: Sage Publication, Inc.

Schwandt, T. A. (2001). Dictionary of qualitative inquiry (2nd ed.). Thousand Oaks: Sage Publications.

Scott, D. (2010). Freedom and individualism on the rocks. In S. E. Schmid (Ed.), *Climbing philosophy for everyone* (pp. 117-129). United Kingdom: Wiley-

Blackwell.

Shaw, W. D., & Jakus, P. (1996). Travel cost models of the demand for rock climbing. *Agricultural and Resource Economics Review*, 25(2), 133-142.

Sherman, J. (1999). *Stone crusade: A historical guide to bouldering in America.* Salt Lake City, UT: Publishers Press.

Shumaker, S. A., & Taylor, R. B. (1983). Toward a clarification of people-place relationships: A model of attachment to place. In N. R. Feimer & E. S. Geller (Eds.), *Environmental psychology: Direction and perspectives* (pp. 219-251). New York: Praeger Publishers.

Smaldone, D., Harris, C., & Sanyal, N. (2005a). An exploration of place as a process: The case of Jackson Hole, WY. *Journal of Environmental Psychology*, 25, 397-414. doi:10.1016/j.jenvp.2005.12.003

Smaldone, D., Harris, C. C., & Sanyal, N. (2008). The role of time in developing place meanings. *Journal of Leisure Research*, 40(4), 479-504.

Smaldone, D., Harris, C. C., Sanyal, N., & Lind, D. (2005b). Place attachment and management of critical park issues in Grand Teton National Park. *Journal of Park and Recreation Administration*, 23(1), 90-114.

Smale, B. (2006). Critical perspectives on place in leisure research. *Leisure*, 30(2), 369-382. doi:10.1080/14927713.2006.9651358

Spartz, J. T. & Shaw, B. R. (2011). Place meanings surrounding an urban natural area: A qualitative inquiry. *Journal of Environmental Psychology*, 31, 344-352. doi:10.1016/j.jenvp.2011.04.002

Steele, W. (2006). Engaging rock climbers – creating opportunities for

collaborative planning and management in protected areas. *Australasian Parks and Leisure,* 9(2), 42-48.

Steffen, J., & Stiehl, J. (1995). Does your gym have six walls? *Journal of Physical Education, Recreation & Dance*, 66(8), 43-47.

Swan, E. (2010). Zen and the art of climbing. In S.E. Schmid (Ed.), *Climbing philosophy for everyone* (pp. 117-129). United Kingdom: Wiley-Blackwell.

Tejada-Flores, L. (1990). Alpinism as humanism: Second thoughts on climbing games. Retrieved from http://www.alpenglow.org/themes/alpinism-as-humanism/index.html.

The Access Fund. (n.d.). The Access Fund. Retrieved from http://www.accessfund.org/site/c.tmL5KhNWLrH/b.4861253/k.BDBB/Home.htm

The Outdoor Industry Foundation. (2011). Outdoor Recreation Participation Report 2011. Boulder: CO: The Outdoor Foundation. Retrieved from http://www.outdoorindustry.org/images/researchfiles/OIA_2011_OutdoorRecreationParticipationReport.pdf?146.

Thorne, S. (2000). Data analysis in qualitative research. *Evidence-based Nursing*, 3, 68-70. doi:10.1136/ebn.3.3.68

Threndyle, S. (1999, January/February). Climbing the walls. *Explore,* 95, 39-42.

Tivers, J. (1997). From artificiality to authenticity? The development of dry ski-slopes in England and Wales. *Area,* 29(4), 344-356. doi:10.1111/j.1475-4762.1997.tb00036.x

Tribe, J. (2004). Knowing about tourism: Epistemological issues. In J. Phillimore & L. Goodson (Eds.), *Qualitative research in tourism ontologies, epistemologies and methodologies* (pp. 46-62). New York: Routledge.

Tuan, Y. (1975). Place: An experiential perspective. *Geographical Review*, 65(2), 151-165. Retrieved from http://www.jstor.org/stable/213970

Tuan, Y. (1991). Language and the making of place: A narrative-descriptive approach. *Annals of the Association of American Geographers*, 81(4), 684-696. Retrieved from http://www.jstor.org/stable/2563430

Turner, V. (1973). The center out there: Pilgrim's goal. *History of Religions*, 12(3), 191-230. Retrieved from http://www.jstor.org/stable/1062024

Twigger-Ross, C. L., & Uzzell, D. L. (1996). Place and identity processes. *Journal of Environmental Psychology*, 16, 205-220. doi:10.1006/jevp.1996.0017

Urry, J. (1995). *Consuming places*. London: Routledge.

Urry, J. (2008). *The tourist gaze* (2nd ed.). London: Sage Publications Ltd.

van Bottenburg, M., & Salome, L. (2010). The indoorisation of outdoor sports: an exploration of the rise of lifestyle sports in artificial settings. *Leisure Studies*, 29(2), 143-160. doi:10.1080/02614360903261479

van der Zee, D. (1990). The complex relationship between landscape and recreation. *Landscape Ecology*, 4(4), 225-236. doi:10.1007/BF00129830

Viesturs, E., & Potterfield, P. (2003). *Himalayan quest: Ed Viesturs on the 8,000-meter giants.* Washington, DC: National Geographic.

Waldrup, R., & McEwen, D. (1994). Rock climbing and wilderness: A study of

climbers' attitudes toward wilderness, climbing impacts and regulation. *Trends*, 31(3), 38-42.

Wang, N. (1999). Rethinking authenticity in tourism experience. *Annals of Tourism Research,* 26(2), 349-370. doi:10.1016/S0160-7383(98)00103-0

Wang, N. (2000). *Tourism and Modernity: A sociological analysis.* Oxford, UK: Elsevier Science Ltd.

Warzecha, C. A., & Lime, D. W. (2001). Place attachment in Canyonlands National Park: Visitors' assessment of setting attributes on the Colorado and Green Rivers. *Journal of Park and Recreation Administration*, 19(1), 59-78.

Weed, M., & Bull, C. (2004). S*ports tourism: Participants, policy and providers.* Oxford: Elsevier Butterworth-Heinemann.

Whaley, D. E., & Krane, V. (2011). Now that we all agree, let's talk epistemology: A commentary on the invited articles. *Qualitative Research in Sport, Exercise and Health*, 3(3), 394-403. doi:10.1080/2159676X.2011.607186

Wick, J. (1997). Ropes, knots, and carabiners. In D. Graydon & K. Hanson (Eds.), *Mountaineering: The freedom of the hills* (6th ed., pp. 112-129). Seattle: The Mountaineers.

Williams, D. R. (2008). Pluralities of place: A user's guide to place concepts, theories, and philosophies in natural resource management. In: L. E. Kruger, T. E. Hall, & M. C. Stiefel (Tech. Eds.), *Understanding concepts of place in recreation research and management* (Gen. Tech. Rep. PNW-

GTR-744, pp. 7-30). Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station. Retrieved from http://www.fs.fed.us/rm/pubs_other/pnw_gtr744_007_030.pdf

Williams, D. R., Patterson, M. E., Roggenbuck, J. W., & Watson, A. E. (1992). Beyond the commodity metaphor: Examining emotional and symbolic attachment to place. *Leisure Sciences*, 14, 29-46.

Williams, D. R., & Vaske, J. J. (2003). The measurement of place attachment: Validity and generalizability of a psychometric approach. *Forest Science*, 49(6), 830-840.

Williams, M. (2000). Interpretivism and generalisation. *Sociology*, 34(2), 209-224. doi:10.1177/S0038038500000146

Wolfe, B. D. (2007). Is there a hold for me? Reflections and experiences surrounding the sport of rock climbing. *Applied Research in Coaching and Athletics Annual*, 22, 23-49.

Woratschek, H., Hannich, F. M., & Ritchie, B. (2007). *Motivations of sports tourists – An empirical analysis in several European rock climbing regions*. Diskussionspapier 02-07, University Bayreuth. Retrieved from http://www.fiwi.uni-bayreuth.de/de/download/WP_02-07.pdf

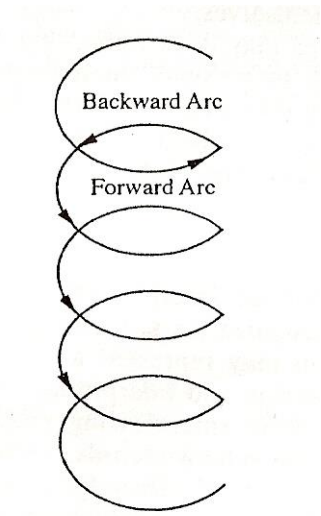
Wright, D. M., Royle, T. J., & Marshall, T. (2001). Indoor rock climbing: who gets injured? *British Journal of Sports Medicine*, 35, 181-185. doi:10.1136/bjsm.35.3.181

Wynveen, C. J., Kyle, G. T., & Sutton, S. G. (2012). Natural area visitors' place

meaning and place attachment ascribed to a marine setting. *Journal of Environmental Psychology,* 32, 287-296. doi:10.1016/j.jenvp.2012.05.001

Yuen, F. C. (2004). "It was fun . . . I liked drawing my thoughts": Using drawings as a part of the focus group process with children. *Journal of Leisure Research*, 36(4), 461-482.

Appendix A: Interpretive Inquiry Spiral



Adapted from Ellis (1998, p. 20).

Appendix B: Contact Posters

UNIVERSITY OF ALBERTA

Faculty of Physical Education and Recreation
Edmonton, Alberta, Canada, T6G 2H9

Do you boulder?

Please tell me about your bouldering experiences!

Why do you boulder? Where is your favourite place to go bouldering? Where do you boulder most often? The information collected about your bouldering experiences and your favourite bouldering areas will be of interest to other climbers and climbing area managers.

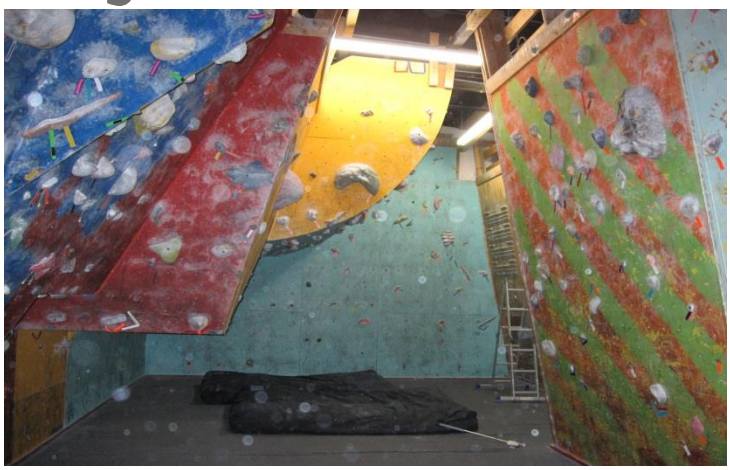
I am looking for individuals who spend a lot of their free time bouldering.
Please contact me to set up an interview and/or receive more detailed information about my research project.

Cory Kulczycki
Faculty of Physical Education and Recreation,
University of Alberta
Email:

UNIVERSITY OF ALBERTA

Faculty of Physical Education and Recreation
Edmonton, Alberta, Canada, T6G 2H9

Do you boulder?



Please tell me about your bouldering experiences!

Why do you boulder? Where is your favourite place to go bouldering? Where do you boulder most often? The information collected about your bouldering experiences and your favourite bouldering areas will be of interest to other climbers and climbing area managers.

I am looking for individuals who spend a lot of their free time bouldering. Please contact me to set up an interview and/or receive more detailed information about my PhD research project.

Cory Kulczycki

Faculty of Physical Education and Recreation,

University of Alberta

Email:

Appendix C: Participant Demographics

Participant	Gender	Age	City of Residence	Employment Status	Years Climbing	Ability Level
1	F	26	Edmonton, AB	Graduate Student – Physical Education	N/A	V3
2	F	22	Edmonton, AB	Graduate Student – Physical Education	?	V8/V9
3	F	21	Edmonton, AB	Nursing Student	3	N/A
4	F	22	Edmonton, AB	Provincial Employee	7	N/A
5	M	25	Edmonton, AB	Graduate Student – Physical Education	1.5	V4/V5 Sport 5.11a
6	F	33	Edmonton, AB	Graduate Student – Physical Education	1 yr 2 months	Lead 5.10 Top-rope 5.11
7	F	30	Edmonton, AB	Climbing Instructor	5	5.11-
8	M	29	Calgary	Climbing Gym Manager	3+	V7/V8
9	M	34	Edmonton, AB	Post-Doctoral Student	N/A	V3
10	M	19	Calgary, AB	Assistant Climbing Instructor	2	V6
11	M	26	Calgary, AB	Sports Chiropractor	8+	V4/V5
12	M	24	Edmonton, AB	Student/ IT Support	13	5.13

13	M	19	Squamish, B.C.	Maintenance	?	5.10/ 5.11
14	M	29	Abbotsford, B.C.	Unemployed/ Student	6	Trad 5.9 Sport 5.10
15	F	35	Calgary, AB	Registered Dietician	12	Flash V4/V5 Work V6
16	M	18	Edmonton, AB	Student/ Climbing Gym Employee	3	V8/V9
17	F	21	Edmonton, AB	Student/ Climbing Gym Employee	4	5.10
18	F	23	Vancouver, B.C.	Unemployed	9-10	V4/V5 Sport 5.11/5.12
19	M	36	Edmonton, AB	Climbing Wall Supervisor	23	V10
20	F	24	Edmonton, AB	Student	3	Sport 5.11 Trad 5.8
21	F	26	Red Deer, AB	Resident Physician/ Doctor	4-5 indoors 2-3 outdoors	Sport 5.10 Trad 5.7

Appendix D: Information Letter

UNIVERSITY OF ALBERTA

Faculty of Physical Education and Recreation
Edmonton, Alberta, Canada, T6G 2H9

Cory Kulczycki, PhD Candidate
Faculty of Physical Education & Recreation
Education & Recreation
University of Alberta
Phone: (780) 492-6582
Email: corykulc@ualberta.ca
tom.hinch@ualberta.ca

Dr. Tom Hinch, Supervisor
Faculty of Physical

University of Alberta
Phone: (780) 942-2759
Email:

Information Sheet: Place Attachment and Bouldering within the Sport of Climbing

INSERT DATE

Dear [participants' names]:

Thank you for showing interest in the Bouldering/Climbing Study. **The study is designed to examine your relationships and experiences with indoor and outdoor bouldering/climbing sites.** I am exploring questions such as "What do you like about bouldering/climbing?" "What is your most memorable indoor/gym experience?" and "What are the characteristics of your favorite bouldering/climbing site?" **I would like to conduct interviews with people that spend a lot of their free time bouldering/climbing.** This is your opportunity to share your experiences and perceptions about bouldering with the academic and climbing communities.

You are invited to take part in a one-on-one interview, which will last approximately 1 hour. The location of the interview will be at a site that is convenient for you (e.g., climbing gym, or coffee shop). Interviews will be audio recorded. Transcribed interviews may be used in the future for re-analysis. Participation is voluntary and confidential. Data will be coded and stored in a locked cabinet to which only the investigator will have access; pseudonyms will be used when results are published from this study. There are no negative consequences for non-participation. You may choose not to respond to any questions, to withdraw from the study and/or have your responses removed at anytime.

If you would like to share your experiences, please contact Cory Kulczycki. This study is being completed as part of the requirement for the completion of the PhD program within the Faculty of Physical Education and Recreation at the University of Alberta. The study's findings will be presented in my PhD

dissertation and shared with recreation, leisure and sport researchers and practitioners through conference presentations and journal articles.

The plan for this study has been reviewed for its adherence to ethical guidelines by a Research Ethics Board at the University of Alberta. For questions regarding participant rights and ethical conduct of research, contact the Research Ethics Office at (780) 492-2615. If you have any questions specific to the study, please free to contact Cory Kulczycki or Dr. Tom Hinch (supervisor) using the contact information included at the top of this letter.

Sincerely,

Cory Kulczycki, PhD Candidate

Appendix E: Interview Guide

Interview Guide

Briefing notes/Preamble:

Thank you for agreeing to meet with me today. The study is designed to examine individuals' relationships with indoor and outdoor bouldering places. This study is being completed as part of the requirement for the completion of the PhD program within the Faculty of Physical Education and Recreation at the University of Alberta.

Participation is voluntary and confidentiality will be ensured through the use of pseudonyms to protect your identity in the results that will be published from this study. No personal information will be given out with the study's final results. You may choose to decline answering any questions that you are asked during the interview process. All information will be kept in a locked cabinet and/or password protected as an electronic document to which only I will have access. This project has been reviewed by the PER/ALES/NS Research Ethics Board at the University of Alberta.

The study findings (including any drawings and transcripts) will be presented in my PhD dissertation and shared with recreation, leisure, and sport researchers through conference presentations and journal articles. Do you have any questions about the research project?

I would like to review the Interview Consent procedures with you. Can you please answer yes or no to the following statements:

Do you understand that you have been asked to be in a research study?

Can I record our conversation today?

Have you read and received a copy of the attached information letter?

Do you understand that you are free to refuse to participate, or to withdraw from the study at any time, without consequence, and that your information will be withdrawn at your request?

Has the issue of confidentiality been explained to you?

Do you understand who will have access to your information?

Thank you, lets begin.

Interview Questions:

Lead in Questions:

A). How old are you? B). What is your occupation? C). Which city is your current residence in?

1a). What do you like about bouldering/climbing?

1b). With whom do you boulder/climb most often?

- What do you like about these individuals?

1c). How long have you been bouldering/climbing for?

How often do you go bouldering/climbing? How long does a typical bouldering session last?

1d). Do you boulder/climb primarily indoors or outdoors?

1e). What level of bouldering/climbing ability are you?

Place Questions:

2a). Have you been on a bouldering/climbing trip?

Can you please describe your most <u>memorable bouldering/climbing trip</u>? I am interested in how you decided where to go bouldering/climbing, how the trip went and how you thought about the trip once you returned home.

Probe:

- When/where was the trip?
- How did you choose the destination?
- Who did you travel with? Climb with?
- What aspects of the destination standout?
- How often do you climb at this place?
- Would you like to climb there more often if possible?

- What do you think about this trip now? (e.g., regrets, wishes, etc).
- How has this trip influenced other trips you have been on?
- What do your senses detect here? (hear, smell, taste, touch)
- What type of holds/features/walls do you prefer? Why?

2b). Can you please describe your most <u>memorable gym</u>* experience. I am interested in how you decided where and when to go climbing indoors, how the gym influences you're climbing experience.

Probe:

- How did you choose the destination/gym?
- Who did you visit with? Climb with?
- What aspects of the gym standout?
    - What type of holds/features/walls do you prefer? Why?
- How often do you climb at this place?
- Would you like to climb there more often if possible?
- How have your visit(s) to this gym influenced other gym experiences?
    - How do you think this gym would influence visits to other gyms in the future?
- How does gym climbing compare with an outdoor context?
- What do your senses detect here? (hear, smell, taste, textures)

* If respondent describes his/her most memorable bouldering/climbing trip as being located in an indoor setting (i.e. gym) then 2b) will focus on exploring the respondent's most memorable trip in an outdoor context rather than indoor context.

3). Please take a few minutes to draw a picture or map of your favorite place to go bouldering/climbing. When you are done I would like to discuss this place with you.

- Cognitive Mapping: Participants will be provided paper and drawing instruments. They will be instructed to draw a map/picture of their <u>favorite</u>

place. We will take time to discuss their map/picture of their favorite place.

- Probes may include:
  - Where is your favorite place to go bouldering/climbing?
    - Can you describe this place too me? How would you move through/use this place?
  - Is this place indoor or outdoors?
  - What are the characteristics that you like the most and least of this place?
    - What type of holds/features/walls do you prefer? Why?
  - How often do you climb there?
  - Would you like to spend more time there?
  - How do you feel when you climb there?
    - What do your senses detect there? (hear, smell, taste, textures)
  - Do you want to provide any other comments about your picture or map?

4). Where do you boulder/climb <u>most often</u>?

Probe:

- Can you please describe this place?
- How does this place differ from your favorite place?
- How often do you boulder here?
- What type of holds/features/walls (e.g., height) do you prefer? Why?
- What do your senses detect here? (hear, smell, taste, textures)
- How did you find this place?

5). What would your ideal climbing gym and area feature?

Concluding Remarks:

- Are there any other comments that you would like to make about your bouldering experiences?

- Are there any comments you would like to add about the interview process?

- Thank you for your time.