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Understanding the motivations of rock climbers: A social worlds study

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ABSTRACT

Understanding the Motivations of Rock Climbers: A Social Worlds Study

by

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Rock climbing affects public lands through erosion, destruction of vegetation, and disturbance to historical sites. Minimum impact messages can help reduce impacts but requires understanding characteristics of the message recipient. The purpose of this study was to understand the motivations of rock climbers to help land managers design more effective minimum impact messages. This study assesses the motivations of rock climbers using a social worlds approach, focusing on the sub-worlds of traditional climbers, sport climbers, and boulderers. I found that traditional climbers are most motivated to pursue a wilderness experience, climb in a natural wilderness setting, and climb in quiet remote settings. Sport climbers are most motivated to climb a quality route, climb in a natural wilderness setting, and push their physical limits while climbing. A small sample size prevented determination of boulderers' motivations. Sport climbers are less motivated by climbing close enough to the ground that a rope is not needed, climbing a route that requires gear to be placed, and having a short approach a climb. Traditional climbers are less motivated by climbing close enough to the ground that a

rope is not needed, completing a single pitch boulder problem project, and having a short approach to a climb. Understanding these motivations can help land managers design minimum impact messages targeted specifically to the type of climbers using a particular location.

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CHAPTER 1

EFFECTIVELY COMMUNICATING WITH ROCK CLIMBERS

Many climbing areas throughout the United States are environmentally degraded by rock climbers. Climbing activity can lead to erosion of trails, littering, destruction of vegetation and cultural sites, and improper disposal of human waste. Land governing agencies and researchers throughout the country have documented and evaluated negative impacts of climbing activity (Farris 1999, Bureau of Land Management 2004, Camp 1998). Some of the areas that have been most affected by climbers include Red Rock Canyon Conservation Area in Nevada, Indian Creek in Utah, Hueco Tanks State Park in Texas, Red River Gorge in Kentucky, and Joshua Tree National Park in California.

The purpose of this study was to understand what motivates rock climbers. This information is needed to help change climber behaviors that degrade the environment. Specifically, a better understanding of climber motivations will help land managers design more effective messages promoting minimum impact behavior. Chapter 1 discusses research on minimum impact messages. This section goes into detail about research on message appeal and normative messages. Chapter 2 discusses rock climbers in the context of social worlds. The research used in these two sections is applied to the development of a structured survey which is discussed in Chapter 3. The survey has

three goals: 1) to determine how climbers identify themselves, 2) to determine a climber's level of involvement in the social world of climbing, 3) to understand the motivations of traditional climbers, sport climbers, and boulderers. Chapter 4 describes the results of my study and Chapter 5 discusses how motivations important to each type of climber can be applied to minimum impact messages.

Minimum impact messages are one approach used to try to change the behavior of people on public lands that leads to environmental impacts such as erosion, destruction of vegetation, and disturbance to historical sites. Although the use of minimum impact messages is not the most effective means to engage the public, limited resources and extensive areas of land to manage make messages an important element in the effort to conserve natural resources (Winters 2005). Therefore research to make minimum impact messages as effective as possible is valuable.

When constructing a message, persuasive communication factors must be considered. These include the source factor (communicator's attractiveness and credibility), receiver factor (characteristics of the receiver), channel factor (how message is communicated), and message factors (the way a message is communicated) (Manfredo 1992). Many studies suggest that more research is needed because there are so many elements that need to be considered when constructing minimum impact messages (e.g McCool & Cole 2000, Reid & Marion 2003, Borrie & Harding 2002, Wirsching et al. 2003).

Since understanding the characteristics of the receiver should be considered when constructing a message and little research focuses on the characteristics and motivations of user groups on public lands, the purpose of this study is to examine the motivations and characteristics of rock climbers. In this case they are the intended receivers of

minimum impact messages. The intention of this study is not to produce an actual minimum impact message but to help gain better perspective on the types of message appeals that will persuade climbers to become better stewards of the public lands they use. The main question asked in this study is: what are the motivational factors and characteristics of rock climbers, specifically traditional climbers, sport climbers, and boulderers? Answering this question will help land managers improve the effectiveness of minimum impact messages.

This type of study is important for many reasons. First, effective messages can change a rock climber's behavior to help reduce impacts to a climbing area. Second, understanding the motivations and characteristics of rock climbers can help land managers determine how to best manage a climbing area on public lands. Third, new knowledge can help connect normative message studies and appeal message studies by tailoring the message to the different social worlds of rock climbers. Each of these benefits can help land management agencies take measures to prevent land degradation.

Minimum Impact Messages

Minimum impact messages are studied both in the social science and recreation management fields. Some of the more recent and relevant studies focus on the type of normative message and the type of appeal that should be used in minimum impact messages. Studies show that normative messaging (messages that describe how people behave and how they should behave) can change behavior and that sometimes poorly constructed normative messages can actually promote negative behavior that creates increased impact to resources (Cialdini *et al.* 2006). However, a review of research

studies on the different types of appeals in minimum impact messages (the part of a message that arouses a reader's emotion) show little conclusive evidence supporting any one specific type of appeal (Duncan & Martin 2002, Johnson & Swearingen 1992, Hockett 2000). The following sections will discuss research on normative messages and the different types of appeals used in minimum impact messages.

Normative Messages

Normative messages focus on the social norms of people. A social norm can be described as a behavior that is socially acceptable or appropriate (Marshall 1994). Normative messages include injunctive and descriptive messages. Injunctive messages tell people how they should behave and descriptive messages describe how people do behave (Winters 2005, Cialdini 2003). The following are examples:

Injunctive message: People should not litter

Descriptive message: People litter

Normative messages can be divided further into prescriptive and proscriptive messages. A prescriptive message encourages a positive behavior. For example a message that is prescriptive will ask a person to stay on a trail. A message that is proscriptive will discourage a negative behavior by asking a person to not go off a trail. Combining the injunctive/descriptive aspect with the prescriptive/proscriptive yields four basic types of normative messages: Injunctive-prescriptive, Injunctive-proscriptive, Descriptive-prescriptive and Descriptive-proscriptive (e.g., Winters 2005, Cialdini *et al.* 2006, and Cialdini 2003). Winters (2005) used the following messages to

deter visitors from walking off-trail in Sequoia Kings Canyon National Park in California.

Condition I - Injunctive - Proscriptive

Please don't go off the established paths and trails, in order to protect the Sequoias and natural vegetation in this park.

Condition II - Descriptive - Proscriptive

Many past visitors have gone off the established paths and trails, changing the natural state of the Sequoias and vegetation in this park.

Condition III - Injunctive - Prescriptive

Please stay on the established paths and trails, in order to protect the Sequoias and natural vegetation in this park.

Condition IV - Descriptive - Prescriptive

The vast majority of past visitors have stayed on the established paths and trails, helping to preserve the natural state of the Sequoias and vegetation in this park (Winters 2005 p. 2).

Winters found that Condition I, the Injunctive-Proscriptive message was most effective at deterring visitors from walking off-trail. Other studies on public land find that Injunctive-Proscriptive messages are most effective in persuading the public to do a desired behavior (e.g. Winters et al. 1998, Cialdini et al. 2006).

Appeals Used In Minimum Impact Messages

Many recreational management researchers have studied different appeals that arouse readers' emotions when constructing minimum impact messages (e.g., Duncan & Martin 2002, Johnson & Swearingen 1992, and Hockett 2000). Types of appeals include: fear, sanction, moral, and interpretive appeals. Fear messages and sanction messages are similar because they scare people into doing a certain behavior. A fear message lets a person know that a negative behavior may cause bodily harm or death. A sanction message lets a person know that he or she will be fined for inappropriate behaviors.

Moral messages and interpretive messages are similar because they focus on the environment. A moral message tries to persuade a person to think that he or she should help the environment. An interpretive message educates people about what will happen to the environment if they do not use appropriate behaviors. The following are examples of each type of message used in various studies.

Fear - Attention Campers - Danger! Never feed Deer. Although deer may appear tame and gentle, they are wild. Deer are unpredictable creatures and could seriously injure you. (Hockett 2000 p. 25).

Sanction - Off trail hikers may be fined (Johnson & Swearingen 1992 p. 109).

Moral - Shortcutting trails unnecessarily degrades nature. Please respect the natural environment by staying on the trails (Borrie & Harding 2002 p. 4).

Interpretive- We are starving. This area is just below the elevation where we trees become scarce. Higher up in the mountains there are fewer of us because of the harsh environment. Because there are so few of us trees here, there is not enough fire wood for campfires. Many of the nutrients we use to feed ourselves come from the wood that ends up on the forest floor. If firewood gathering for campfire were permitted, we trees would have a harder time living here. For this reason, please use a portable cook stove in the area you are about to enter (Duncan & Martin 2002, p. 21).

Research shows that each of these appeals is effective to some degree in promoting desired behaviors on public lands. Hockett (2000) conducted a study on moral messages and fear messages to encourage people to stop feeding deer in Shenandoah National Park in Virginia. She found that in the absence of a minimum impact message, 63% of the visitors fed the deer. When a fear message was displayed, only 38.5% of the visitors fed deer, and when a moral message was used only 25% of the visitors fed the deer. This study shows that both moral and fear messages can promote desired behaviors, and that moral messages were more effective in this case.

Other studies suggest that moral/interpretive messages can be as effective as fear/sanction messages at promoting desired behaviors. Duncan and Martin (2002) used a laboratory experiment to compare the effectiveness of sanction signs versus moral/interpretative signs for influencing wilderness behavior. Each participant viewed a series of slides of a hypothetical wilderness outing. Participants responded to written scenarios and indicated the likelihood that they would perform the behaviors addressed. In three of the four scenarios, interpretation/moral messages were as effective as the sanction messages at persuading participants to perform desired behaviors (Duncan & Martin 2002).

Johnson and Swearingen (1992) examined the effectiveness of trailside signs in deterring off trail hiking in Mount Rainier National Park in Washington. They found that a threatening sanction message was more effective than a moral message at deterring off trail hiking. These studies show that one particular appeal is not consistently more effective than another. Focusing on a particular user groups' motivations and characteristics is one way of understanding the type of appeal in impact messages that may be most effective at promoting minimum impact behavior.

This chapter discussed different ways messaging has been approached in research. The next chapter explores literature on social worlds and applies social world theories to rock climbers. Messaging will be revisited at the end of the thesis.

CHAPTER 2

UNDERSTANDING THE SOCIAL WORLDS OF ROCK CLIMBERS

Persuasive communication literature tells us that understanding the receiver's characteristics should be considered in minimum impact messaging (Manfredo 1992). The receiver characteristic focused on in this study is the motivation of rock climbers. A social worlds analysis was done on traditional climbers, sport climbers, and boulderers to understand their motivations. This chapter focuses on social world literature and applies social world theories to the social world of rock climbers.

To appeal effectively to climbers, it is important to understand their motivations and characteristics. A "social world" can be defined as a group of individuals bound by common interests, events and practices (Unruh 1979). Recreational groups such as rock climbers, hikers, ATV users, and horseback riders often operate within their own social world. Some groups can be divided into even smaller social sub-worlds based on shared characteristics, behaviors or hobbies (Strauss 1984, Kling & Gerson 1978). Rock climbers can be separated by their climbing style, preference in setting, and motivations into three primary sub-worlds, namely, traditional climbers, sport climbers, and boulderers. The following are general descriptions:

Boulderer: A person who climbs short distances up rock boulders using only a crash pad (a foam pad placed on the ground in an event of falling) for safety.

Sport Climber: A person who climbs routes usually less than 100 feet high on natural rock walls using only permanent bolts on the rock face for protection/safety while ascending the route. Bolts are generally placed 10 to 12 feet apart.

Traditional Climber: A person who climbs on natural rock faces generally ranging from 100 feet to thousands of feet high. Traditional climbing safety equipment includes camming devices and nuts that can be inserted and removed from cracks and imperfections in rock faces.

Popular climbing literature discusses the differences between traditional climbers, sport climbers, and boulderers (e.g., Long 2004, Graydon 1992, DeAngelo 2004, Luebben 2004, Achey 2005). Craig Luebben, a life long climber and author of Rock Climbing: Mastering Basic Skills, describes each type of climbing in this manner.

Sport Climbing

Ah, the joy of sport climbing. You carry a small pack to the crags and then safely clip your way up a line of bolts, enjoying the gymnastic movement without much worry about the consequences of a fall. You can also push your physical limits, because bolts are (usually) easy to clip, allowing you to focus on the moves (Leubben 2004, p. 153).

Traditional Climbing

Traditional climbing is a path to adventure. You forge your way up the wall, sometimes unsure of the path, the climbing moves, or the protection. Each lead demands creativity, problem solving, athletic skill, and commitment. (Leubben 2004, p. 172)

Bouldering

When bouldering you climb close to the ground with out a rope. Bouldering is pure climbing- no gear to fiddle with, ropes to encumber

you, or time spent belaying. It is just you and the rock. (Leubben 2004,p. 236)

The history of rock climbing in the United States suggests how rock climbers evolved into the different social worlds of rock climbing. Climbing was first introduced to the United States from Eastern Europe in the 1930's. At first, the sport centered on the exploration of mountain peaks. Now, it includes the climbing of artificial rock walls inside climbing gyms. In the early 1980's, Alan Watts introduced sport climbing to Smith Rock's State Park in Oregon. Despite some resistance by the climbing community of this type of climbing, sport climbing grew in popularity throughout the 1990's (Watts 1992). John Gill introduced bouldering to the U.S. climbing world in the 1950's. The popularity of bouldering grew slowly at first but in the 1990's climbing icon Chris Sharma created a huge bouldering movement (Gill 2000).

Although popular climbing literature describes the differences in these climbing social worlds and the history of climbing further suggests the separation of these different climbing social sub-worlds, little formal research has been done on the motivations and characteristics of the different social worlds of rock climbers. Therefore in order to understand what motivations should apply to message appeals, this thesis research examines how motivations differ in the climbing sub-worlds.

Another consideration in this research is a climber's level of involvement within their social world of rock climbing. According to Bryan's recreation specialization theory, as a person becomes more specialized in a specific activity, behaviors and orientations such as "...equipment preference, type of experience sought, and desired setting for activity" change (Bryan 2000, p.18). In previous research, Bryan examined how outdoor

recreation participants could be placed along a continuum ranging from low level of involvement to high level of involvement (Bryan 2000). Bryan’s concept is similar to Unruh’s (1979) theory that suggests as person’s level of involvement within a social world increases, their orientation, experiences, relationships, and commitment change. These changes can be set along a continuum divided into four social types: strangers, tourists, regulars, and insiders. Table 2.1 describes characteristics of integration into social worlds by level of involvement.

Table 2.1 Characteristics of Integration into Social Worlds by Level of Involvement.

Involvement Level Characteristics Of Participation	Strangers – Low level of involvement	Tourists – Minimal level of involvement	Regulars – Medium level of involvement	Insiders – High level of involvement
Orientation toward social world activities	<i>naïve</i> simplistic understanding	<i>curious</i> eagerness to know about it	<i>habituated</i> frequent and sustained presence	<i>central to identity</i> primary to life experiences
Experiences with social world activities	<i>disoriented</i> confusion and uncertainty	<i>oriented</i> seeking information and authenticity	<i>integrated</i> experience social world in holistic and routine way	<i>creative</i> create/construct experiences for others
Relationships with members social world	<i>superficial</i> ephemeral and transitory	<i>transient</i> fleeting, discarded once achieved	<i>familiar</i> personal, “familial” first name basis	<i>Intimate</i> high personal, close friends
Commitment to the social world	<i>detached</i> marginal if existent	<i>entertained</i> committed only as long as it is entertaining	<i>attached</i> relatively long- term, sustained	<i>dedicated</i> committed to recruiting new participants

Stave (1998, p.41) adapted from Unruh (1979, p. 122)

These categories are further supported by a study conducted by Ewert (1985) who investigated the motivations of why people climb mountains. He found that inexperienced climbers were more motivated by extrinsic values such as recognition and

socialization and more experienced climbers were more motivated by intrinsic values such as challenge, personal testing, and locus of control (Ewert 1985, p. 241). Although this study gave insight into understanding the motivations of a mountain climber, and how motivations can change depending on experience, it did not explore how motivations can differ among types of rock climbers.

Decker (1989) examined the motivations of hunters applying for deer licenses in New York and found that they have three different motivational orientations. These motivational orientations include affiliative, achievement, and appreciative orientations. Decker describes a person who hunts for the enjoyment of being with others and sharing common experiences as having an *affiliative* orientation. A person who hunts for the specific goal of bagging an animal would have an *achievement* orientation, and a person who hunts to be connected with a natural environment would have an *appreciative* orientation (Decker 1989). In Decker's study, 65% of hunters had an appreciative motivation, 24% had an affiliative motivation, and 11% hunted for the achievement (Decker 1989). This research supports the idea that motivations can be different within a social world.

Research on Rock Climbers

Schuster *et al.* (2001) suggest that traditional climbers and sport climbers differ in their attitudes toward resource management. They found that compared to sport climbers, traditional climbers “(1) had more reservation about bolt use, (2) were more open to the need for management, (3) were willing to exercise greater discretion concerning the use of bolts, and (4) had a more negative attitude about the climbing

communities' participation in management" (Schuster *et al.* 2001 p. 409). Other popular literature suggests that sport climbers and traditional climbers have different attitudes on bolting practices in general (Achey 2005 and Starkman 2003).

My research tests whether there are motivational differences between traditional climbers, sport climbers and boulderers. I ask: what are the different motivational factors and characteristics of the social sub-worlds of rock climbers including traditional climbers, sport climbers, and boulderers? Popular climbing literature indicates that there are specific differences in these different social sub-worlds of rock climbers. Therefore I am using Unruh's theory on "Characteristics and Types of Participation in Social Worlds" to understand which motivational factors are important to traditional climbers, sport climbers, and boulderers.

Dividing Rock Climber Sub-worlds

Climbers belong to different social sub-worlds. Popular climbing literature discusses the different types of climbers in considerable lengths. I used this literature to develop criteria that can be used to distinguish climber types: traditional climbers, sport climbers, and boulderers. I supplemented this literature with informal interviews. The following sections describe this typology.

Popular literature on rock climbing focuses on three types of climbers. This includes traditional climbers, sport climbers, and boulderers (Long 2004, Graydon 1992, DeAngelo 2004, Luebben 2004, Achey 2005). I developed my initial ideas about what motivates each climber type from popular literature.

To further refine my research, I conducted semi-structured interviews with selected climbers. I asked the questions, “what motivates you to climb?” and “what type of climbing do you like best: traditional climbing, sport climbing, or bouldering?” I interviewed by phone 17 climbers living in California, Colorado, North Carolina, Nevada, Ohio, and Montana. I selected participants as representatives of the general climbing community, climbing guides, gym managers, climbing advocacy groups, and retail climbing goods merchants. When respondents were no longer adding new factors to the list, I combined them into a single list of motivational factors. Information gathered from this list and popular literature gave me the basis for my hypotheses.

The following are motivational factors compiled from review of popular literature and informal interviews.

Climbers in general are motivated to climb by:

- Pushing physical limits
- Social scene/ hanging out with a group of friends
- Being in wilderness settings
- Placing traditional climbing gear
- Climbing a quality route
- Climbing multi-pitch routes
- Having the safety of bolts to follow up a route
- Having the multi-dimensional challenge of the approach, climb, and descent
- Completing a single-pitch project
- Completing a boulder problem project
- Being close enough to the ground that a rope is not needed
- Seeing the views from high above
- Topping out on a mountain top/rock formation

Popular literature and informal interviews also suggested that some motivational factors are more important to certain types of climbers than others. The list above can be separated by its level of importance to each type of climber. From the list of motivational factors and the interviews I developed the following hypotheses:

Sport climbers find the following motivational factors most important:

- Climbing a route with a safe bolted line to follow
- Pushing your physical limits
- Having a good social scene
- Climbing with a group of friends
- Completing a single-pitch project

Sport climbers find the following motivational factors least important:

- Being in remote quiet settings
- Pursuing a wilderness experience
- Hanging out with a group of friends
- Climbing a route that requires gear to be placed
- Climbing a multi-pitch route
- Having a multi dimensional challenge
- Seeing views from high above
- Climbing close enough to the ground that a rope is not needed
- Having only one or two partners
- Having a short approach to the route

Traditional climbers find the following motivational factors most important:

- Having only one or two partners
- Being in remote quiet settings
- Pursuing a wilderness experience
- Climbing routes that require gear to be placed
- Climbing a multi-pitch route
- Topping out on a rock formation/mountain top
- Having the multi-dimensional challenge of the approach, climb, and descent

Traditional climbers find the following motivational factors least important:

- Pushing their physical limits
- Having a good social scene
- Climbing with a group of friends
- Climbing a route with a bolted line
- Completing a single pitch project
- Completing a boulder problem project
- Climbing close enough to the ground that a rope is not needed

Boulderers find the following motivational factors most important:

- Pushing their physical limits
- Having a good social scene
- Hanging out with a group of friends while climbing
- Climbing close enough to the ground that a rope is not needed
- Completing a boulder problem

Boulderers find the following motivational factors least important:

- Having only one or two climbing partners
- Climbing a route that requires gear to be placed
- Climbing multi-pitch routes
- Climbing a route with a safe bolted line to follow
- Having a multidimensional challenge
- Completing a single pitch project
- Pursuing a wilderness experience

Survey Development

I used the initial list of motivations to construct a structured survey to test these hypotheses. A survey is the preferred type of data collection procedure for this study because the questions can focus on the specific motivational factors of rock climbers without having to conduct long interviews. Surveys are normally used to provide a “quantitative description of trends, attitudes, or opinion by studying a sample of that population” (Creswell 2003 p.153). My study examines the characteristics and motivations of rock climbers by sampling a population of rock climbers from a world class climbing destination that serves traditional climbers, sport climbers, and boulderers.

Tables 2.2, 2.3, and 2.4 show the expected importance of each motivational factor to sport climbers, traditional climbers, and boulderers. Expected ranges for each climber type are shaded in grey. Motivational factors are ranked using a Likert-Scale from 1 = very important to 5 = not important at all.

Unruh suggested that an individual’s orientation toward a social world activity, experiences within the social world activity, relationships with members of a social world, and commitment toward the social world activity are all pertinent to understanding a person’s level of involvement within a social world (Unruh 1979). If Unruh’s theory

Table 2.2 Expected Importance of Motivational Factors to Sport Climbers (1 = very important, 5 = not important at all)

Question/ Motivational Factor	1	2	3	4	5	Expected Ranges
a. Pushing my physical limits on a route						1-2
b. A good social scene						1-2
c. Being in remote quiet settings						3-4
d. Having only one or two partners						4-5
e. Pursuing a wilderness experience						3-4
f. Climbing a route that requires gear to be placed						4-5
g. The quality of a route						1-2
h. Doing multi-pitch routes						4-5
i. Being in natural wilderness settings						3-4
j. Having a short approach to the route						3-4
k. Hanging out with a group of friends while climbing						1-2
l. Climbing a route with a safe bolted line to follow						1-2
m. Topping out on a rock formation/ mountain top						3-4
n. Having the multi-dimensional challenge of the approach, climb, and descent.						4-5
o. Seeing the view high off the ground while climbing						4-5
p. Climbing close enough to the ground so that you do not need a rope						4-5
q. Completing a single pitch project						1-2
r. Completing a boulder problem project						3-4

Table 2.3 Expected Importance of Motivational Factors to Traditional Climbers(1 = very important, 5 = not important at all)

Question/ Motivational Factor	1	2	3	4	5	Expected Ranges
a. Pushing my physical limits on a route						2-3
b. A good social scene						4-5
c. Being in remote quiet settings						1-2
d. Having only one or two partners						1-2
e. Pursuing a wilderness experience						1-2
f. Climbing a route that requires gear to be placed						1-2
g. The quality of a route						1-2
h. Doing multi-pitch routes						1-2
i. Being in natural wilderness settings						1-2
j. Having a short approach to the route						4-5
k. Hanging out with a group of friends while climbing						4-5
l. Climbing a route with a safe bolted line to follow						4-5
m. Topping out on a rock formation/mountain top						2-3
n. Having the multi-dimensional challenge of the approach, climb, and descent.						2-3
o. Seeing the view high off the ground while climbing						2-3
p. Climbing close enough to the ground so that you do not need a rope						4-5
q. Completing a single pitch project						4-5
r. Completing a boulder problem project						4-5

Table 2.4 Expected Importance of Motivational Factors to Boulderers (1 = very important, 5 = not important at all)

Question/ Motivational Factor	1	2	3	4	5	Expected Ranges
a. Pushing my physical limits on a route						1-2
b. A good social scene						1-2
c. Being in remote quiet settings						3-4
d. Having only one or two partners						4-5
e. Pursuing a wilderness experience						3-4
f. Climbing a route that requires gear to be placed						4-5
g. The quality of a route						1-2
h. Doing multi-pitch routes						4-5
i. Being in natural wilderness settings						3-4
j. Having a short approach to the route						3-4
k. Hanging out with a group of friends while climbing						1-2
l. Climbing a route with a safe bolted line to follow						4-5
m. Topping out on a rock formation/ mountain top						4-5
n. Having the multi-dimensional challenge of the approach, climb, and descent.						4-5
o. Seeing the view high off the ground while climbing						4-5
p. Climbing close enough to the ground so that you do not need a rope						1-2
q. Completing a single pitch project						4-5
r. Completing a boulder problem project						1-2

holds for climbers in this study, then the more involved a climber is in the social world of climbing the more likely he or she would fall in my expected ranges from tables 2.2, 2.3, and 2.4. In the survey I also included questions to gauge the climber's level of involvement.

Level of Involvement

As with all types of sub-worlds, climbers can be distinguished by level of involvement. Separating climbers by their level of involvement includes looking at a climber's orientation toward climbing, experience in climbing, relationships with other climbers and commitment to the sport. Orientation toward climbing can be described as how comfortable a person is within the social world of climbers. A climber's orientation can be determined by how comfortable a climber is with climbing terms or jargon. Rock climbing has technical language that can be strange and confusing to an individual who is new to rock climbing. As individuals become more involved with rock climbing, they are more comfortable using climbing terms such as "belay," "biner," and "beta."

Another important characteristic to determine a persons' level of involvement is a climber's experience level. A climber's experience has several components. These include how often they climb, whether or not they lead climbs, the difficulty of the climb they lead, whether or not climbing is their profession, and whether or not they have put up any first ascents. The more integrated climbers are in the social world of climbers the more climbing experience they gain. Relationships with other climbers can also determine a person's level of involvement within the social world of rock climbers. The more rock climber friends a person has the more integrated he or she is into the rock

climbing social world. A person's commitment to climbing is another factor to consider. As a climber becomes more committed to rock climbing he or she tends to own more climbing gear and become more involved with other climbing clubs and organizations such as Access Fund, American Safe Climbing Association, and American Alpine Club. Increase in the frequency a person climbs not only increases a climber's experience level but also his or her level of commitment. Table 2.5 shows a climber's characteristics of participation in a climbing social world based on his or her orientation toward climbing, experience in climbing, relationships with other climbers, and commitment to the sport.

Tables 2.6, 2.7 and 2.8 show the specific questions along with the answers that I used to separate climbers by level of involvement and climber type (sport climber, traditional climber and boulderer). A climber's level of involvement can be divided into four social types of climbers including Beginner, Recreational, Avid, and Elite. These categories are adapted from Unruh (1979) and his description of the four social types: strangers, tourists, regulars, and insiders.

Table 2.5 Climbers' characteristics of participation in the climbing social world.

Characteristics of Participation	Indicators to separate and categorize climbers.
Orientation toward climbing	Rock Climbing has technical language that is strange and confusing to an individual's who new to the climbing social world. As climbers become more involved within the climbing social world they are more comfortable using climbing terms.
Experiences with climbing	As climbers become more involved in rock climbing: <ul style="list-style-type: none"> • They climb more often • They climb at harder grades • They lead climbs • They may consider a climbing profession • They may put up first ascents
Relationships with other climbers	As climbers become more involved in a climbing social world they have more friends that are climbers.
Commitment to climbing	As climbers become more committed to the world of rock climbing: <ul style="list-style-type: none"> • They climb more frequently • They own more climbing gear • They become involved in climbing organizations • They climb at harder grades

Table 2.6 Expected answers of sport climbers at different levels of involvement

Question	Beginner (low level of involvement)	Recreational (minimal level of involvement)	Avid (Medium level of involvement)	Elite (High level of involvement)
1. Phrase that describes you best as a rock climber	Beginner	Sport	Sport	Sport
2. How many years have you been climbing?	< or equal to 1 year	> 1 year	> 1 year	> 1 year
3. Do you lead sport climbs?	No	Yes	Yes	Yes
4. Do you lead traditional climbs	No	No	yes	yes
5. On Average how many days do you climb in a year	> 30 days a year	30-80 days a year	80-100 days a year	Over 100 days a year
6. Have you put up any first ascents	No	No	No	Yes
7. Are you comfortable using climbing jargon	No	Yes	Yes	Yes
8. At what level do you consistent climb?	Only top ropes	- leads at lower levels 5.9 and below	-leads 5.10-5.11	-leads 5.12 and above
9. What % on average do you spend on each type of climbing	Only top ropes	> 50% sport climbing	> 50% sport climbing	> 50% sport climbing
10. Which of the following do you own	- owns no more than shoes harness and chalk bag	-owns same gear as beginner plus a rope and maybe sport draws.	- owns all the gear as rec. sport climber plus sport draws	- owns same gear as avid
11. Is climbing part of your job or career in some way	No	No	No	Professional climber, climbing guide, works for climbing organization, works or manages gym.
12. Are you a member of any climbing organizations?	No	No	Yes	Yes
13. Approximately what percentage of your friends are climbers	- no real relationships	- < 50% of friends are sport climbers	> than 50% of friends are climbers	- > than 50% of friends are climbers

Table 2.7 Expected answers of traditional climbers at different levels of involvement

Question	Beginner (low level of involvement)	Recreational (minimal level of involvement)	Avid (Medium level of involvement)	Elite (High level of involvement)
1. Phrase that describes you best as a rock climber	Beginner	Traditional or All around	Traditional or all around	Traditional or all around
2. How many years have you been climbing?	< or equal to 1 year	> 1 year	> 1 year	> 1 year
3. Do you lead sport climbs	No	Yes	Yes	Yes
4. Do you lead traditional climbs	No	No	Yes	Yes
5. On Average you many days do you climb in a year	> 30 days a year	30-80 days a year	80-100 days a year	Over 100 days a year
6. Have you put up any first ascents	No	No	No	Yes
7. Are you comfortable using climbing jargon	No	Yes	Yes	Yes
8. At what level do you consistently climb?	Only top ropes	- leads at lower levels 5.8 and below	-leads 5.9-5.10+	-leads 5.11 and above
9. What % on average do you spend on each type of climbing	Only top ropes	> 50% trad. climbing	> 50% trad. climbing	> 50% trad. Climbing
10. Which of the following do you own	- owns no more than shoes harness and chalk bag	-owns same gear as beginner plus a rope and maybe sport draws.	- owns all the gear as rec. sport climber plus sport draws	- owns same gear as avid
11. Is climbing part of your job or career in some way	No	No	No	Professional climber, climbing guide, works for climbing organization, works or manages gym.
12. Are you a member of any climbing organizations?	No	No	Yes	Yes
13. Approximately what percentage of your friends are climbers	- no real relationships	- < 50% of friends are sport climbers	> than 50% of friends are climbers	- > than 50% of friends are climbers

Table 2.8 Expected answers of boulderers at different levels of involvement

Question	Beginner (low level of involvement)	Recreational (minimal level of involvement)	Avid (Medium level of involvement)	Elite (High level of involvement)
1. Phrase that describes you best as a rock climber	Beginner	Boulderer	Boulderer	Boulderer
2. How many years have you been climbing?	< or equal to 1 year	> 1 year	> 1 year	> 1 year
3. Do you lead sport climbs	No	Yes	Yes	Yes
4. Do you lead traditional climbs	No	No	yes	Yes
5. On Average you many days do you climb in a year	> 30 days a year	30-80 days a year	80-100 days a year	Over 100 days a year
6. Have you put up any first ascents	No	No	No	Yes
7. Are you comfortable using climbing jargon	No	Yes	Yes	Yes
8. At what level do you consistently climb?	Only top ropes	- Boulders V0 and below	-Boulders V1-V5	-Boulders V6 and above
9. What % on average do you spend on each type of climbing	Only top ropes	> 50% boulderers	> 50% boulders	> 50% boulders
10. Which of the following do you own	- owns no more than shoes harness and chalk bag	-owns same gear as beginner plus a rope and maybe sport draws.	- owns all the gear as rec. sport climber plus sport draws	- owns same gear as avid
11. Is climbing part of your job or career in some way	No	No	No	Professional climber, climbing guide, works for climbing organization, works or manages gym.
12. Are you a member of any climbing organizations?	No	No	Yes	Yes
13. Approximately what percentage of your friends are climbers	- no real relationships	- < 50% of friends are sport climbers	> than 50% of friends are climbers	- > than 50% of friends are climbers

CHAPTER 3

METHODS

To test my hypotheses, I surveyed 320 climbers visiting Red Rock Canyon Conservation Area (RRCCA) located 10 miles west of Las Vegas, Nevada during the peak of the climbing season the spring of 2007. RRCCA is a world-class climbing destination where approximately 50,000 climbers from all over the world come to climb each year (Peccia 2001). From this survey I analyzed the motivational factors of traditional climbers, sport climbers, and boulderers.

Development of Survey

The survey was designed with three different purposes: 1) to determine how a climber identified himself or herself in the climbing community, 2) to determine how integrated a climber was in the climbing community, and 3) to determine the importance of motivational factors to a given climber. I designed the survey to have three different sections. The first section asked each participant to identify himself or herself as either a beginner climber, a traditional climber, a sport climber, a boulderer, or an all-around climber. The second section focused on the degree of integration of a participant in the social worlds of climbers. The third section asked each climber to rate motivational

factors using a Likert Scale (1= very important and 5= not important at all). The survey instrument used in this study is included as Appendix 1.

Administration of Survey

I conducted a pilot study with 10 local rock climbers in Las Vegas, Nevada. I asked the participants to take the survey and then provide feedback on the wording of each question. I edited the questions based on the feedback of these climbers for final survey design.

The focus of this study was on RRCCA. Since I could not obtain a permit to sample climbers directly in RRCCA, I used cluster sampling. Cluster sampling is used when there are no lists of the entire population from which to select a sample. Cluster sampling “narrows down the sampling field from large, heterogeneous chunks to smaller homogeneous ones that are easy to sample directly. It is based on the fact that people act out their lives in more or less natural groups, or clusters” (Bernard 2000 p.154). Climbers tend to cluster in areas including climbing gyms, climbing equipment stores, and meeting places of climbing organizations. I developed a list of locations where both local and non-local climbers congregate while visiting RRCCA. These areas included the, The Red Rock Rendezvous, Desert Rock Sports, Red Rock Climbing Center, and the Las Vegas Climbers Liaison Council. Individuals from each organization or location signed informed consent forms prior to completing the surveys to comply with the University of Nevada, Las Vegas Office for the Protection of Research Subjects policies. A detailed description of each location visited is provided below.

Red Rock Climbing Center is an indoor climbing gym located at 8201 West Charleston Blvd in Las Vegas, Nevada. Many local climbers climb at the gym after work hours. I administered 12 surveys in the gym during a weekday evening.

Desert Rock Sports is a climbing retail store located at 8221 West Charleston Blvd. in Las Vegas, Nevada. Many local and non-local climbers visit this store on their rest days from climbing. I administered 46 surveys at this location during their opening hours of operations.

Red Rock Rendezvous is a national climbing festival held every year in RRCCA. More than 600 climbers from all over the country attended this festival presented by Mountain Gear, (www.mountaingear.com) an online climbing retail store. I set up a booth next to registration and administered a total of 222 surveys at this three-day festival. The festival was visited by both locals and non-local and provided a great cross section of climbers with different levels of experience and different climber types.

Las Vegas Climbers' Liaison Council (LVCLC) is a nonprofit organization dedicated to continuing access for climbers to RRCCA. I attended a LVCLC meeting and administered eight surveys. LVCLC meetings are attended by many local climbers.

Conducting surveys at the above locations allowed me to obtain a diverse sample of the climbers that visit RRCCA. Since the characteristics of the climbing population at RRCCA have not been studied, it is not possible to determine how well this sample represents the population as a whole. Instead, I tried to represent the diversity of the climbers in the area by polling climbers at a variety of locations. These locations attract both local and non-local climbers, climbers of different experience levels, and different

climber types. Since RRCCA is a world class climbing destination it was important to survey both locals and non-locals.

Analysis

I coded surveys in two ways: by how climbers identified themselves and by criteria based on their level of involvement within the social sub-worlds. Climbers who identified themselves specifically either as traditional climbers, sport climbers, boulderers, and beginners I coded as self-identified traditional climbers, self-identified sport climbers, self-identified boulders and self-identified beginners, respectively. For each of the four groups, I calculated the averages, standard deviations, and frequency distributions for each motivational factor question.

I then coded all surveys by the respondent's level of involvement within each social sub-world using Tables 2.6, 2.7 and 2.8 as a guide. I coded each respondent as categorized sport climbers, categorized traditional climbers, categorized boulderers, categorized all-around climber and categorized beginners. I first determined how long each respondent climbed. If a person climbed less than one year then I coded he or she as a beginner. I then determined the percent of time each respondent spent on each type of climbing. If a person spent most of his or her time traditional climbing, I coded the climber as a traditional climber. If a person spent most of his or her time sport climbing, I coded the person as a sport climber. I used the same logic for boulderers. If a person spent equal amounts of time traditional climbing, sport climbing, and bouldering, I determined whether the person led either sport climbs or traditional climbs. If a person led only sport climbs, and all other criteria were equal, I coded the person as a sport

climber. This same logic was used with traditional climbers. If the person led both sport climbs and traditional climbs, I determined the type of equipment the climber owned. If the climber owned only a sport rack, then I coded the climber as a sport climber. If a person owned only a traditional rack, then the climber was coded as a traditional climber. If a person was equal in all of the above criteria and spent equal amounts of time traditional climber, sport climbing, and bouldering, led both sport climbs and traditional climbs, and owned all types of climbing gear, then I coded the climber as an all-around climber. After coding climbers by their level of involvement, I calculated averages, standard deviations and frequency distributions for each motivational factor question. Finally, I compared the distribution of motivational factors between self-identified and categorized groups. Surveys that were incomplete I did not analyze. Most incomplete surveys did not have the back page filled out.

CHAPTER 4

RESULTS

I administered a total of 320 surveys at five different locations for this study of which 253 surveys were complete enough to analyze. Table 4.1 shows the distribution of surveys across the four climber types for both self-identified and categorized climbers. It also shows how each coded categorized climber identified himself or herself in the survey. Most climbers who identified themselves as traditional climbers and sport climbers were also coded as being categorized traditional climbers and categorized sport climbers (Table 4.1). The table shows that a total of 253 surveys were coded in this study.

Table 4.1 shows that only 15 respondents were coded as boulderers. Since this is not enough data to analyze, results focus only on traditional climbers and sport climbers. The results associated with categorized climber types were indistinguishable from those of self-identified climbers. So I report the results reports focus only by categorized climbers.

The following sections review my hypotheses and results. The results are displayed on tables that show averages, frequency distributions, and standard deviations of each climber type. I report expected ranges of responses by climber types and motivational factor. I then compare these motivations as reported by climbers in the surveys.

Table 4.1 Surveys coded as self-identified and categorized climber types

Categorized Self-Identified	Traditional Climbers	Sport Climbers	Boulderers	All-around Climbers	Beginners	Total
Traditional Climbers	52	2	2	–	1	57
Sport Climbers	–	54	1	–	8	63
Boulderers	–	4	5	–	6	15
All-round Climbers	32	60	5	6	-	103
Beginners	0	5	1	0	9	15
Total	84	125	14	6	24	253

Sport Climbers

Table 4.2 shows the expected range of each motivational factor’s importance to sport climbers. Expected ranges are shaded in grey. Motivational factors hypothesized to be most important to sport climbers have expected ranges of 3.0 or less. Motivational factors hypothesized to be least important to sport climbers have expected ranges of 3.0 or greater.

Table 4.3 shows the frequency distribution, standard deviation, and observed averages of sport climbers for each motivational factor question. The cells shaded in grey show the expected ranges of each motivational factor’s importance to sport climbers. The dark outlined cells show how the majority of sport climbers answered each motivational factor question. Results show that all motivational factors hypothesized to be most important to sport climbers are ranked as very important (1), important (2), or somewhat important (3).

Table 4.2 Expected ranges for motivational factors to sport climbers. (1 = very important; 5 = not important at all)

Question/ Motivational Factor	1	2	3	4	5	Expected Ranges
a. Pushing my physical limits on a route						1-2
b. A good social scene						1-2
c. Being in remote quiet settings						3-4
d. Having only one or two partners						4-5
e. Pursuing a wilderness experience						3-4
f. Climbing a route that requires gear to be placed						4-5
g. The quality of a route						1-2
h. Doing multi-pitch routes						4-5
i. Being in natural wilderness settings						3-4
j. Having a short approach to the route						3-4
k. Hanging out with a group of friends while climbing						1-2
l. Climbing a route with a safe bolted line to follow						1-2
m. Topping out on a rock formation/ mountain top						3-4
n. Having the multi-dimensional challenge of the approach, climb, and descent.						4-5
o. Seeing the view high off the ground while climbing						4-5
p. Climbing close enough to the ground so that you do not need a rope						4-5
q. Completing a single pitch project						1-2
r. Completing a boulder problem project						3-4

Table 4.3 Motivational Factors of Sport Climbers (1 = very important; 5 = not important)

Categorized Sport Climbers	1	2	3	4	5	Unsure/ No Opinion	Standard Deviation	Average	Expected
a. Pushing my physical limits on a route	37	38	37	7	1	0	0.96	2.14	1-2
b. A good social scene	29	25	40	15	10	1	1.22	2.60	1-2
c. Being in remote quiet settings	28	45	36	5	4	2	1.30	2.37	3-4
d. Having only one or two partners	11	14	41	23	26	5	1.23	3.34	4-5
e. Pursuing a wilderness experience	35	38	28	12	6	1	1.15	2.29	4-5
f. Climbing a route that requires gear to be placed	4	11	38	18	44	4	1.17	3.76	4-5
g. The quality of a route	36	55	17	6	3	3	0.95	2.02	1-2
h. Doing multi-pitch routes	10	19	30	23	31	7	1.29	3.41	4-5
i. Being in natural wilderness settings	45	42	16	10	5	2	1.12	2.05	3-4
j. Having a short approach to the route	9	17	30	22	40	2	1.30	3.57	3-4
k. Hanging out with a group of friends while climbing	26	42	27	20	5	0	1.13	2.47	1-2
l. Climbing a route with a safe bolted line to follow	23	40	30	13	13	1	1.23	2.61	1-2
m. Topping out on a rock formation/ mountain top	9	35	26	22	26	2	1.29	3.18	3-4
n. Having the multi-dimensional challenge of the approach, climb, and descent.	6	27	41	24	18	3	1.12	3.18	4-5
o. Seeing the view high off the ground while climbing	19	37	36	16	8	3	1.12	2.63	4-5
p. Climbing close enough to the ground so that you do not need a rope	3	5	10	12	86	3	1.22	4.61	4-5
q. Completing a single pitch project	17	41	26	22	10	3	1.19	2.72	1-2
r. Completing a boulder problem project	12	27	21	26	30	3	1.35	3.30	3-4

N = 120, except for n - r (N = 119)

Observed averages for these factors are in the range of 1-3. This is slightly outside the expected range of 1-2. The motivational factor that was closest to the expected range was the *quality of route (g)* with an observed average of 2.02 and the expected range of 1-2.

The frequency distribution for motivational factors expected to be least important to sport climbers is also shown in table 4.3. Most categorized sport climbers ranked motivational factors d, f, h, j, and p as being somewhat important (3), slightly important (4) or not important at all (5). Observed averages for motivational factors d, f, h and o are slightly outside the low end of the expected range (4-5) and have a standard deviation close 1.2. Observed averages for motivational factors p and j are in the expected range (4-5). Motivational factor m, n and r have a high variability in distribution of responses. Most categorized sport climbers ranked motivational factors c, e, and i as very important (1), important (2), or somewhat important (3). In addition, observed averages for these motivational factors are outside the expected average range. The least important factor to sport climbers was motivational factor (p) *climbing close enough to the ground that you do not need a rope (p)*. The observed average for motivational factor p was 4.61. This was within the expected range of 4-5.

Traditional Climbers

Table 4.4 shows the expected range of each motivational factor's importance to traditional climbers. Motivational factors hypothesized to be most important to

Table 4.4 Expected Ranges of Motivational Factors of Traditional Climbers (1 = very important; 5 = not important)

Question/ Motivational Factor	1	2	3	4	5	Expected Ranges
a. Pushing my physical limits on a route						2-3
b. A good social scene						4-5
c. Being in remote quiet settings						1-2
d. Having only one or two partners						1-2
e. Pursuing a wilderness experience						1-2
f. Climbing a route that requires gear to be placed						1-2
g. The quality of a route						1-2
h. Doing multi-pitch routes						1-2
i. Being in natural wilderness settings						1-2
j. Having a short approach to the route						4-5
k. Hanging out with a group of friends while climbing						4-5
l. Climbing a route with a safe bolted line to follow						4-5
m. Topping out on a rock formation/mountain top						2-3
n. Having the multi-dimensional challenge of the approach, climb, and descent.						2-3
o. Seeing the view high off the ground while climbing						3
p. Climbing close enough to the ground so that you do not need a rope						5
q. Completing a single pitch project						5
r. Completing a boulder problem project						5

4.5 Motivational Factors of Traditional Climbers (1= very important; 5= not important)

Categorized Traditional Climber	1	2	3	4	5	Unsure/ No Opinion	Standard Deviation	Average	Expected
a. Pushing my physical limits on a route	17	29	22	10	5	1	1.13	2.48	2-3
b. A good social scene	9	20	21	15	19	0	1.32	3.18	4-5
c. Being in remote quiet settings	27	35	16	1	1	4	0.84	1.93	1-2
d. Having only one or two partners	9	20	18	14	22	1	1.37	3.24	1-2
e. Pursuing a wilderness experience	39	31	12	1	0	1	0.76	1.70	1-2
f. Climbing a route that requires gear to be placed	16	32	21	7	5	3	1.09	2.42	1-2
g. The quality of a route	34	34	12	3	0	1	1.14	1.89	1-2
h. Doing multi-pitch routes	22	31	19	7	5	0	1.13	2.31	1-2
i. Being in natural wilderness settings	43	29	8	1	3	0	0.95	1.71	1-2
j. Having a short approach to the route	2	7	16	25	34	0	1.08	3.98	4-5
k. Hanging out with a group of friends while climbing	9	12	26	16	19	2	1.28	3.29	4-5
l. Climbing a route with a safe bolted line to follow	3	9	18	19	33	2	1.18	3.85	4-5
m. Topping out on a rock formation/mountain top	7	23	32	13	7	2	1.06	2.88	2-3
n. Having the multi-dimensional challenge of the approach, climb, and descent.	12	32	21	11	8	0	1.17	2.65	2-3
o. Seeing the view high off the ground while climbing	18	29	19	9	5	4	1.14	2.43	2-3
p. Climbing close enough to the ground so that you do not need a rope	0	3	5	8	62	6	0.77	4.65	4-5
q. Completing a single pitch project	3	12	20	24	23	2	1.15	3.63	4-5
r. Completing a boulder problem project	4	5	11	23	32	7	1.16	3.99	4-5

N = 84 except for r (N = 82)

traditional climbers have expected ranges of 3.0 or less. Motivational factors hypothesized to be least important to traditional climbers have expected ranges of 3.0 or greater.

The results show most categorized traditional climbers ranked all motivational factors in table 4.5 as very important (1), important (2), and somewhat important (3) with the exception of motivational factor d. Observed averages for eight of the 11 motivational factors hypothesized to be of greater importance were in the expected ranges. Motivational factor d has a high variability in distribution of responses.

Table 4.5 also shows the frequency distribution for motivational factors expected to be least important to traditional climbers. Most categorized traditional climbers ranked motivational factors j, k, l, p, q and r as being of little importance. Motivational factor b showed a high variability in distribution of responses. Most observed averages are slightly outside expected ranges. However, all observed averages are greater than 3.0. The motivational factor least important to traditional climbers is *climbing close enough to the ground that you do not need a rope*. The observed average of this motivational factor is 4.65 and falls within the expected range of 4-5.

Boulderers

Table 4.6 shows the expected range of each motivational factor's importance to boulderers. Table 4.7 shows the frequency distribution of categorized boulderers for motivational factors hypothesized to be most important and least important to boulderers. Due to a low number of respondents in this category, there is high variability in distributions of responses for most motivational factors. These results do suggest that

Table 4.6 Expected Ranges of Motivational Factors to Boulderers (1 = very important; 5 = not important)

Question/ Motivational Factor	1	2	3	4	5	Expected Ranges
a. Pushing my physical limits on a route						1-2
b. A good social scene						1-2
c. Being in remote quiet settings						3-4
d. Having only one or two partners						4-5
e. Pursuing a wilderness experience						3-4
f. Climbing a route that requires gear to be placed						4-5
g. The quality of a route						1-2
h. Doing multi-pitch routes						4-5
i. Being in natural wilderness settings						3-4
j. Having a short approach to the route						3-4
k. Hanging out with a group of friends while climbing						1-2
l. Climbing a route with a safe bolted line to follow						4-5
m. Topping out on a rock formation/ mountain top						4-5
n. Having the multi-dimensional challenge of the approach, climb, and descent.						4-5
o. Seeing the view high off the ground while climbing						4-5
p. Climbing close enough to the ground so that you do not need a rope						1-2
q. Completing a single pitch project						4-5
r. Completing a boulder problem project						1-2

4.7 Results of Motivational Factors to Boulderers

Categorized Boulderers	1	2	3	4	5	Unsure/No Opinion	Standard Deviation	Average	Expected
a. Pushing my physical limits on a route	5	5	3	0	0	0	0.80	1.85	1-2
b. A good social scene	2	0	4	3	4	0	1.39	3.54	1-2
c. Being in remote quiet settings	4	3	3	1	0	2	1.04	2.09	3-4
d. Having only one or two partners	3	3	1	2	4	0	1.66	3.08	4-5
e. Pursuing a wilderness experience	6	5	2	0	0	0	0.75	1.69	3-4
f. Climbing a route that requires gear to be placed	0	3	3	1	6	0	1.30	3.77	4-5
g. The quality of a route	3	5	4	1	0	0	0.93	2.23	1-2
h. Doing multi-pitch routes	1	1	2	3	5	1	1.34	3.83	4-5
i. Being in natural wilderness settings	6	6	0	0	0	1	0.52	1.50	3-4
j. Having a short approach to the route	0	0	3	3	7	0	0.85	4.31	3-4
k. Hanging out with a group of friends while climbing	1	3	3	3	3	0	1.32	3.31	1-2
l. Climbing a route with a safe bolted line to follow	0	2	2	4	5	0	1.12	3.92	4-5
m. Topping out on a rock formation/mountain top	2	3	2	3	2	1	1.41	3.00	3-4
n. Having the multi-dimensional challenge of the approach, climb, and descent.	0	3	3	3	4	0	1.19	3.62	4-5
o. Seeing the view high off the ground while climbing	1	4	4	2	2	0	1.22	3.00	4-5
p. Climbing close enough to the ground so that you do not need a rope	0	2	2	2	6	1	1.21	4.00	1-2
q. Completing a single pitch project	1	4	3	2	2	1	1.28	3.00	4-5
r. Completing a boulder problem project	4	7	2	0	0	0	0.69	1.85	1-2

most categorized boulderers find motivational factors a, e, i, and r of a higher level of importance. Results also suggest that boulderers find motivational factors j and l of little importance.

Results Summary

The results show the most important motivational factors to sport climbers are climbing *a quality route (g)*, *being in a natural wilderness setting (i)*, and *pushing physical limits (a)*. These factors had the lowest observed averages and standard deviations. Results show the most important motivational factors to traditional climbers are *pursuing a wilderness experience (e)*, *being in a natural wilderness setting (i)*, and *being in remote quiet settings (c)*. Table 4.8 summarizes these findings.

Table 4.8 motivational factors most important to sport climbers and traditional climbers

Sport Climbers	Traditional Climbers
<ul style="list-style-type: none"> • A quality route • Being in a natural wilderness setting • Pushing physical limits 	<ul style="list-style-type: none"> • Pursuing a wilderness experience • Being in a natural wilderness setting • Being in remote quiet settings

Results show the motivational factors least important to sport climbers are climbing *close enough to the ground that a rope is not needed (p)*, *climbing a route that requires gear to be placed (p)*, and *having a short approach (j)*. The observed averages were the highest for each of these factors with low standard deviations. Motivational factors least important to traditional climbers are *climbing close enough to the ground that a rope is not needed (p)*, *completing a boulder problem project*, and *having a short approach (j)*.

Table 4.9 summarizes these results.

Table 4.9 motivational factors least important to sport climbers and traditional climbers

Sport Climbers	Traditional Climbers
<ul style="list-style-type: none"> • Climbing close enough to the ground a rope is not needed • Climbing a route that requires gear to be placed • Having a short approach 	<ul style="list-style-type: none"> • Climbing close enough to the ground a rope is not needed • Completing a boulder problem project • Having a short approach

CHAPTER 5

DISCUSSION

In the following sections I interpret the results of my survey in with respect to my hypotheses.

The following sections discuss the most and least important motivational factors to sport climbers and traditional climbers, the results compared to the hypotheses, and the low number of respondents for boulderers. The last sections of this chapter compare findings in the field and discuss how motivational factors can be applied to minimum impact messaging.

Strongest Findings for Sport Climbers

The results show the motivational factors most important to sport climbers are *climbing a quality route* (g), *being in a natural wilderness setting* (i), and *pushing physical limits* (a). I expected climbing a quality route and pushing physical limits would be important to sport climbers. With low observed averages greater than 3.76 and standard deviations close to 1.0, these hypotheses are supported. However, I did not expect being in a natural wilderness setting to be an important motivational factor to sport climbers. Instead, I found that this motivational factor had a low observed average of 2.0 and low standard

deviation of 1.12. These statistics show that this was an important factor to sport climbers.

Results show the motivational factors least important to sport climbers are *climbing close enough to the ground that a rope is not needed (p)*, *climbing a route that requires gear to be placed (p)*, and *having a short approach (j)*. I expected each of these motivational factors to be least important to sport climbers. The observed averages for each motivational factor are higher than 3.0 and standard deviations are close to 1.0. Therefore I consider my hypotheses supported for these motivational factors. Later in this section I will discuss again why it is important to understand what motivational factors are least important to climbers when constructing a minimum impact message.

Discussion for all Motivational Factors of Sport Climbers

Table 5.1 summarizes all hypothesized motivational factors and shows whether they were supported or unsupported based on results from Table 4.3. The results from Table 4.3 (p.36) show that motivational factors expected to be most important to sport climbers were rated to have a higher level of importance. Although most observed averages for motivational factors expected to be important to sport climbers are slightly outside the expected average ranges, all observed averages are less than 3.0. In addition, all standard deviations are close to 1.0. This indicates that everyone agreed on the importance of the motivational factor. The most important motivational factors are labeled in Table 5.1 as “Strongly Supported.

5.1 Strength of support for hypotheses about sport climbers

Hypothesized factors	Strength of Support
<i>Most Important</i>	
Pushing physical limits on a route	Strongly Supported
The quality of route	Strongly Supported
Climbing a route with a safe bolted line to follow	Supported
A good social scene	Supported
Climbing with a group of friends	Supported
Completing a single-pitch project	Supported
<i>Least Important</i>	
Being in remote quiet settings	Not Supported
Being in natural wilderness settings	Not Supported
Pursuing a wilderness experience	Not Supported
Climbing a route that requires gear to be placed	Supported
Climbing a multi-pitch route	Supported
Having a short approach	Supported
Having only one or two climbing partners	Supported
Having a multi dimensional challenge	Not Supported
Seeing views from high above	Not supported
Climbing close enough to the ground that a rope is not needed	Strongly Supported
Topping out on a rock formation	Not Supported
Completing a boulder problem project	Not Supported

Unexpected Findings for Sport Climbers

The most unexpected finding is the importance of wilderness to sport climbers. expected sport climbers would not find *being in remote quiet settings (c)*, *pursuing a wilderness experience (e)*, and *being in natural wilderness settings (i)* to be important motivational factors. Instead results suggest that these three motivational factors are very important to sport climbers. All observed averages for each of these factors are close to 2.0 and standard deviations are close to 1.0. *Being in remote quiet settings* is one of the most important motivational factors to sport climbers. The reason why these results are so unexpected is discussed later in this chapter.

Strongest Findings for Traditional Climbers

The most important motivational factors to traditional climbers are *pursuing a wilderness experience (e)*, *being in a natural wilderness setting (i)*, and *being in remote quiet settings (c)*. I expected each of these motivational factors to be very important to traditional climbers. Results show that my hypotheses are supported with observed averages less than 2.0 and standard deviations less than 1.0.

Motivational factors least important to traditional climbers are *climbing close enough to the ground a rope is not needed (p)*, *completing a boulder problem project (r)*, and *having a short approach to a route (j)*. I expected these motivational factors to be less important to traditional climbers. My hypotheses are supported with observed averages of greater than 3.85 and standard deviations close to 1.0.

Discussion for all Motivational Factors
of Traditional Climbers

Table 5.2 summarizes all hypothesized motivational factors of traditional climbers and shows whether they are supported or unsupported base on results shown in table 4.5. All motivational factors expected to be most important to traditional climbers are supported. The majority of traditional climbers ranked motivational factors expected to be most important at a higher level of importance. Most observed averages for these factors fell in the expected ranges and were less than 3.0. The standard deviations for each of these factors were no greater than 1.14. The results shown in Table 4.5 support the hypotheses.

Table 5.2 Strength of support for hypothesized motivational factors

Hypothesized factors	Strength of Support
<i>Most Important</i>	
Pushing physical limits on a route	Supported
The quality of route	Strongly Supported
Climbing a route that requires gear to be placed	Supported
Topping out on a rock formation	Supported
Being in remote quiet settings	Supported
Climbing a multi-pitch route	Supported
Being in natural wilderness settings	Strongly Supported
Pursuing a wilderness experience	Strongly Supported
Seeing views from high above	Supported
Having only one or two climbing partners	Not Supported
Having a multi dimensional challenge	Supported
<i>Least Important</i>	
Climbing with a group of friends	Supported
A good social scene	Not Supported
Having a short approach	Supported
Climbing a route with a safe bolted line to follow	Supported
Completing a single-pitch project	Supported
Climbing close enough to the ground that a rope is not needed	Strongly Supported
Completing a boulder problem project	Supported

Unexpected Findings for Traditional Climbers

I expected that *having only one or two partners (d)* when going climbing would be an important motivational factor for traditional climbers. However table 4.5 shows that traditional climbers did not have a unified response to this question. While I administered the surveys, several participants asked for clarification of this question. The original intent of the question was to determine whether it was important to climbers to have only one or two climbing partners when climbing a route rather than climbing with a group of people. When I asked participants how they interpreted the question, they felt it meant climbing with the same one or two people every time you go out climbing.

Another unexpected finding with traditional climbers was with motivational factor b (*a good social scene*). I expected a good social scene would be less important to traditional climbers. However, traditional climbers did not have a unified opinion on this motivational factor (Table 4.5).

Motivational Factors of Boulderers

Due to a low number of respondents, few conclusions can be drawn from Table 4.7 about boulderers. Results suggest that *pushing physical limits (a)*, *the quality of route (g)*, and *completing a boulder problem project (r)* are most important to boulderers. Results show that only one participant ranked the quality of route being only slightly important (4). All other respondents in this category ranked these motivational factors as a higher level of importance. The results also suggest that *doing a multi-pitch route (h)* is less important to boulders.

This study had a low number of respondents that were identified as boulderers. Having higher numbers would have given me more data to analyze. If I had spent more time conducting surveys at an area such as Kraft Mountain in RRCCA, my numbers may have been higher. Yet, RRCCA is not a world-class *bouldering* area; it is a world-class *climbing* destination. Therefore, either case location may have limited the number of participants in this category.

Differences and Similarities Among Rock Climbers

The results suggest that a difference between traditional climbers and sport climbers is traditional climbers are greatly motivated to climb a route that requires gear to be placed whereas sport climbers are highly motivated to climb a route with a bolted line to follow. Clipping bolts are the foundation of sport climbing and placing climbing gear is the foundation for traditional climbing.

Overall, many motivational factors have a similar level of importance for traditional climbers and sport climbers. Traditional climbers and sport climbers ranked *the quality of route (g)*, and *being in a natural wilderness settings (i)* as being some of the most important motivational factors. It makes sense that both types of climbers would feel *the quality of route (g)* is important. People are naturally drawn to do the most popular route or a high quality route. Climbing guide books tend to rate climbs by using a star system to let people know the quality of a route. The fewer stars a climb has, the lower its rating.

Another similarity between traditional climbers and sport climbers is they feel that *climbing close enough to the ground that you do not need a rope (p)* is unimportant.

Observed averages for both types of climbers were greater than 4.0. It is interesting to note that the majority sport climbers and traditional climbers ranked this motivational factor as not important at all. This did not happen with any other survey question.

Rock Climbers and Wilderness

The results showed that both traditional climbers and sport climbers felt that the element of wilderness while climbing was an important motivational factor. These are interesting results because traditional climbing and sport climbing generally takes place in different settings. Sport climbing areas are not typically found in a wilderness setting, where wilderness is defined as a natural setting that appears relatively untouched by humans (Cunningham, Cunningham, & Saigo 2007). Most sport climbing areas are usually relatively short distances from parking areas (less than a mile). Sport climbing routes also are generally clustered together with 5-10 climbing routes in one area. Climbing routes can be so close together that a person can have a conversation with the person climbing the route next to him or her, similar to climbing gyms. When traditional climbing, climbers generally hike in over a mile to one climbing route in a remote location. Routes tend to be farther apart, giving climbers less contact with other climbers in the area. The results of this study show that both traditional climbers and sport climbers find the element of wilderness important, yet the settings of each style of climbing are quite different. This suggests that sport climbers and traditional climbers perceive wilderness differently. A finding that is supported by other research on wilderness perceptions (Lutz et al. 1999, Nash 1982, Sop Shin and Jaackson 1997). Nash (1982) explains that because wilderness is so subjective, it is difficult to have a universal

definition for wilderness. In this study sport climbers may define wilderness as simply being outdoors in areas away from cities or communities. Traditional climbers may define wilderness as a remote natural area, where you need to hike several miles to get away from civilization. The following section discusses the wilderness appeal can be applied to minimum impact messages even though it is perceived differently by traditional climbers and sport climbers.

Applying Motivation Factors to Messages

In Chapter 2 I discussed the different types of message research in both the recreation management field and the social science field. In this section I discuss how applying important motivation factors of rock climbers to the types of messages discussed in Chapter 2 can create a more effective message. Climbers will have more of a connection with the message if the message tells them that an adverse behavior will actually inhibit the climber from pursuing a certain goal.

The ultimate goal of this study is to help gain better insight about the types of message appeals that will persuade climbers to become better stewards of the public lands they use. As Manfredo explains in his book Influencing Human Behaviors, understanding the receiver's characteristics is an aspect of persuasive communication that should be considered when attempting to influence human behavior (Manfredo 1992 p.6). The receiver characteristic I focus on in this study is the motivation of rock climbers.

The results of this study show that the most important motivational factors to traditional climbers are *being in remote quiet settings (c), pursuing a wilderness*

experience (e), being in a natural wilderness setting (i), and the quality of route (g). This suggests that these motivational factors should be used in message appeals at a traditional climbing area. The most important motivational factors to sport climbers are *pushing physical limits (a), being in a natural wilderness setting (i), and the quality of a route (g).* These motivational factors should be used in a message appeal at a sport climbing area.

Originally, I expected that traditional climbers and sport climbers would have completely different important motivational factors. If their motivations were different then that would suggest different types of messages would be needed for traditional climbing areas and a sport climbing areas. However, my study shows that traditional climbers and sport climbers both feel that *the quality of a route* and *being in a natural wilderness setting* are the most important motivational factors. Although traditional climbers and sport climbers may perceive wilderness differently, they both still think that being in wilderness while climbing is important. Therefore, the same type of messages could be used at both traditional climbing areas and sport climbing areas.

In my study I found that having a short approach was less important to both traditional climbers and sport climbers. I also found that being in wilderness is important to traditional climbers and sport climbers. Therefore Message 2 below should be a more effective message than Message 1.

The following are two injunctive/proscriptive message appeals.

Message 1:

Please don't go off established trail. Staying on the trail is the quickest way to the climbing area. (less effective)

Message 2:

Please don't go off established trails. Staying on the trail helps maintain a wilderness setting. (more effective)

The following are two fear messages. The first message is a standard fear message that does not have motivational appeal to rock climbers. The second message explains how a quality route, an important motivational factor for traditional climbers and sport climbers, will be destroyed if a person climbs on sandstone after a rainstorm. Applying an important motivational factor creates a more effective fear message. Again, based on my findings, I would expect that Message 3 below would be less effective than Message 4.

Message 3:

Do not climb on sandstone after a rain storm. You may break a hand hold causing a potential fall. (less effective)

Message 4:

Do not climb on sandstone after a rain storm. You may break a hand hold causing a potential fall and degrade the quality of the route. (more effective)

Motivational factors unimportant to climbers should not be used in minimum impact messages.

Limitations to This Study

The focus of this study was to understand what motivates traditional climbers, sport climbers, and boulderers who climb in Red Rock Canyon Conservation Area (RRCCA). In order to obtain a representative sample of the climbing community I originally wanted to conduct the survey directly in RRCCA, at different pullouts where traditional climbs, sport climbs and boulders are found. Because of permit issues I could not sample climbers directly climbing in RRCCA. Instead, I used cluster sampling and sampled locations near RRCCA where local and non-local climbers visit. This limits the

interpretation of the results because there is no research on the characteristics of climbers that visit RRCCA.

Future Studies

The following sections discuss future studies that could add to my research and how changing the wording in some questions could yield stronger or less ambiguous results in similar studies.

This study added to our understanding of the types of motivations that could be applied to messages. From this study I learned what types of motivations are important to climbers. The next step is to research whether motivational factors applied to message appeals are effective at changing behaviors and improving the condition of the site where minimum impact messages are used. In their extensive research on effective visitor education programs, Marion and Reid (2007) found that little research has focused on whether site conditions changed after minimum impact education efforts (Marion & Reid 2007 p. 17). A follow up study to my research could focus on whether minimum impact messages containing motivational factors are more effective at improving site conditions than messages not containing motivation factors at degraded rock climbing areas.

A study could be done in RRCCA researching the effects of messages on climbers who improperly dispose of human waste. This study could be conducted in three phases. Phase 1 would determine where the most extensive amounts of human waste are found in both traditional climbing areas and sport climbing areas. The human waste would be removed from the locations and each site would be monitored through the active climbing season (typically November through the end of March). In phase 2, the waste

must then be removed a second time and quantified. Minimum impact messages would be installed at each site. These messages would not contain motivational factors that are important to climbers. The sites would be monitored again through the active climbing season and human waste would be quantified. In the third phase human waste would be removed a third time and messages using important motivational factors would be installed. The sites again would be monitored through the active climbing season and human waste would be quantified. The results would show if messages improve the condition of the site. In addition a comparison could be done on effectiveness of each set of messages and whether there is a difference in the effectiveness of the messages at traditional climbing areas and sport climbing areas.

My research could also be adapted for other recreational user groups. For example, Off-Highway Vehicle users have a variety of different types of users groups including people that drive, ATVs, Jeeps , and Landcrusiers. Each of these groups has its own organization and club creating different social sub-worlds. Studying these user groups would give insight on how land managers should approach the specific social sub-worlds of Off-Highway Vehicle users on problems such as access issues and minimum impact practices.

My research suggested that traditional climbers and sport climbers perceive wilderness differently. A future study could examine explicitly how sport climbers and traditional climbers explicitly perceive the concept of wilderness. This type of study could help land managers gain a better understanding as to the type of settings the different type of climbers expect to experience when climbing.

One aspect of this study that may increase confidence of the results for similar studies is changing some of the wording in the survey. Although using the scale 1= very important, 2= important, 3= somewhat important, 4= slightly important, 5= not important at all, 9= unsure or don't understand question was very effective in determining the level of importance of each motivational factor, the number 3 should have been the most neutral answer. Instead, 1 = very important, 2 = important, 3 = not important or unimportant, 4 = relatively unimportant and 5=not important at all may have been a better choice of wording. Other wording changes should include question number 13d: *Having only one or two climbing partners*. Based on the results with traditional climbers that question was not worded well. Another wording change suggestion for future studies pertains to Question 13i; *Climbing a route with a safe bolted line to follow*. Greg Barnes with American Safe Climbing Association pointed out that bolts do not make a route safe. The safety a route depends on depends on whether bolts were placed properly. A climb is not necessarily safe because it is a bolted route. I would remove the word "safe" from the question.

A study focusing on how climbers' motivational factors change as they become more integrated into the social world of climbing would be an interesting follow up study. Beginners have a very low level of involvement and do not give a good representation of what motivates people to climb. Unruh describes strangers in a social world as having a low level of involvement, with a simplistic understanding toward the social world activities (Unruh 1979). This is similar to beginners in the social world of rock climbers. Beginners are still learning climbing terms, proper climbing techniques, and safety skills. In addition, they are still figuring out what type of climbing they are interested in and

why. Future studies could focus on following how motivations change as climbers' progress from beginners to being more integrated into a climbing social world.

Finally, I recommend adding a demographic section to the survey to develop a better baseline for understanding climber characteristics. The demographics I should have added to this survey include where the participant lives, the age of the individual, and the frequency they have climbed in RRCCA. This information is important for several reasons. Knowing what region a person generally climbs would determine whether motivations of climbers are different depending on the region. A majority of the surveys I distributed were at the Red Rock Rendezvous which draws from a national audience. Knowing the ages of respondents would show whether motivations are different based on the age of the individual. It would also show whether there is an age difference in sport climbers and traditional climbers. Knowing how many times a climber has climbed in RRCCA would show whether motivations are different for climbers that climb regularly in RRCCA versus climbers that have only climbed there once. Including this demographic to a future survey would help determine whether the sample represents the climbing population as a whole.

Conclusion

The purpose of this study was to understand the motivations of rock climbers to help land managers design more effective minimum impact messages. In this study I found that the different social sub-worlds of rock climbers share certain motivations but also have distinct differences. Traditional climbers are more motivated by having a wilderness experience, climbing in natural wilderness settings, and climbing in a remote

quiet setting. Sport climbers are more motivated by climbing in natural wilderness settings, pushing physical limits, and climbing a quality route. Understanding these motivations can help land managers design minimum impact messages targeted specifically to the type of climbers using a particular location.

Land governing agencies need to understand the types of recreational user groups that visit public lands in order to understand how to effectively communicate with them. Several recreational groups including hikers, horseback riders, mountain bikers, backpackers, off-highway vehicle users, and rock climbers use the public lands. Understanding motivations of each of these user groups can help land managers effectively communicate with each recreational group and manage lands more effectively.

APPENDIX 1

SURVEY
INSTRUMENT

Rock Climbing Survey

Thank you for taking this survey. This survey will be used to understand the motivations of different types of rock climbers in order to create effective minimum impact messages. These messages can help reduce the number of access restrictions to climbing areas. If have questions please contact Amy Miller at 702-774-7019

1. Please choose the phrase below that best describes you as a rock climber.

- Sport rock climber (seeks primarily sport climbs)
 Traditional rock climber (seeks primarily traditional climbs)
 Boulderer – primarily bouldering
 All around climber- sport climber, traditional climber, and boulderer
 Beginner, don't know
 Other, specify _____

2. For how many years have you been doing each of the following types of rock climbing?

- Indoor climbing/bouldering _____ years
 Sport climbing _____ years
 Traditional climbing _____ years

3. Do you lead sport climbs? (Check the most appropriate response.)

- Yes, _____ # of years
 No

4. Do you lead traditional climbs? (Check the most appropriate response.)

- Yes, _____ # of years
 No

5. On average how many days do you spend doing any kind of climbing in a year, even if it is in the gym climbing?

_____ days

6. Have you ever put up any first ascents?

- Yes, _____ # of routes
 No

7. Are you comfortable using climbing jargon?

- Yes
 No

8. At what level do you consistently climb each of the following? (Please enter the appropriate grade based on the Yosemite Decimal System 5.0- 5.14abcd or V0 to V14)

- _____ Traditional climbing _____ Sport climbing
 _____ Top rope climbing _____ Bouldering

9. Of all the time you spend climbing in a year, what %, on average do you spend on each type of climbing.

- _____ Traditional climbing
 _____ Climbing/ Bouldering (inside)
 _____ Sport climbing (outside)
 _____ Bouldering (outside)
 _____ Ice climbing
 _____ Aid climbing
 _____ Mountaineering

_____ = 100%

10. Which of the following do you own? (Check all that apply)

- Climbing harness _____ Sport rack
 Climbing shoe _____ Full Traditional rack
 Belay device _____ Crash Pad
 Chalk bag _____ Brush
 Stick clip _____ Rope

11. Is climbing part of your career/job in some way? (Ex. Climbing/outdoor industry, professional climber) If so please specify.

- _____ Yes, Specify _____
 _____ No

12. Are you a member of any climbing organizations?

- Yes, _____ # of organizations
 No

13. Approximately what percentage of your friends are climbers? (Please check one)

- 0-25%
 25%- 50%
 50%- 75%
 75%- 100%

14. Please circle the number that indicates how important each of the following factors is to you when climbing.

	How important is.....	Very Important	Important	Somewhat Important	Slightly Important	Not Important At All	Unsure / No opinion
a.	Pushing my physical limits on a route	1	2	3	4	5	9
b.	A good social scene	1	2	3	4	5	9
c.	Being in remote quiet settings	1	2	3	4	5	9
d.	Having only one or two partners	1	2	3	4	5	9
e.	Pursuing a wilderness experience	1	2	3	4	5	9
f.	Climbing a route that requires gear to be placed	1	2	3	4	5	9
g.	The quality of a route	1	2	3	4	5	9
h.	Doing multi-pitch routes	1	2	3	4	5	9
i.	Being in natural wilderness settings	1	2	3	4	5	9
j.	Having a short approach to the route	1	2	3	4	5	9
k.	Hanging out with a group of friends while climbing	1	2	3	4	5	9
l.	Climbing a route with a safe bolted line to follow	1	2	3	4	5	9
m.	Topping out on a rock formation/mountain top	1	2	3	4	5	9
n.	Having the multi-dimensional challenge of the approach, climb, and descent.	1	2	3	4	5	9
o.	Seeing the view high off the ground while climbing	1	2	3	4	5	9
p.	Climbing close enough to the ground so that you do not need a rope	1	2	3	4	5	9
q.	Completing a single pitch project	1	2	3	4	5	9
r.	Completing a boulder problem project	1	2	3	4	5	9
o.	Other, (please specify)	1	2	3	4	5	9

15. Please rank the following factors in the order of importance they are to you when climbing (1= most important to 10= least important).

- ___ Pushing physical limits on a route
- ___ A good social scene
- ___ Taking the risk of climbing a route without having the safety of bolts to follow
- ___ The quality of the route
- ___ Reducing the element of risk by having the safety of a bolted line
- ___ Climbing close enough to the ground that you do not need a rope
- ___ Having the multi-dimensional challenge of the approach, climb, and descent
- ___ Doing a multi-pitch climb
- ___ Topping out on a rock formation/climb
- ___ Completing a project

REFERENCES

- Achey, J. (2005, July). The natural line: Celebrating America's best traditional climbs. *Climbing*, 42-47.
- Bernard, R. H. (2000). *Social research methods: Qualitative and quantitative approaches*. Thousand Oaks, CA: Sage Publications.
- Bryan, H. (2000). Recreation specialization revisited. *Journal of Leisure Research*, 32(1), 18-21.
- Borrie, W. T. & Harding, J. A. (2002). Effective recreation visitor communication strategies: Rock climbers in the Bitterroot Valley, Montana. USDA Forest Service Res. Note RMRS-RN-15
- Bureau of Land Management (2004). *Indian Creek Corridor plan and environmental assessment*. Retrieved November 13, 2005, from the Bureau of Land Management Web site: <http://www.blm.gov/utah/monticello/ICEA.pdf>
- Camp, R. J. & Knight, R. L. (1998). Effects of rock climbing on cliff plant communities in Joshua Tree National Park. *Conservation Biology*, 12(6), 1302-1306.
- Cialdini, R. B (2003). Crafting normative messages to protect the environment. *American Psychological Society*, 12(4), 105-109.
- Cialidini, R. B., Demaine, L. J., Sagarin, B. J, Barrett, D. W, Rhoads, K. R, & Winter, P. L. (2006). Managing social norms for persuasive impact. *Social Influence*, 1(1), 3-15.
- Creswell, J. (2003). *Research design: Qualitative, quantitative, and mixed methods approaches*. Thousand Oaks, CA: Sage Publications.
- Cunningham, W. P., Cunningham, M. A., & Saigo, B. W. (2007) *Environmental science a global concern*. New York, NY: McGraw-Hill
- DeAngelo, L. & Thiry, Bill., (2004). *Red Rock odyssey*. Las Vegas: Verex Press.
- Decker, D. J. & Connelly, N. A. (1989). Motivations for deer hunting: Implications for antlerless deer harvest as a management tool. *Wildlife Society Bulletin*, 17, 445-463.

- Duncan G. S. & Martin, S.R. (2002). Comparing the effectiveness of interpretive and sanction messages for influencing wilderness visitors' intended behavior. *International Journal of Wilderness*, 8(3), 20-25.
- Ewert, A. (1985). Why people climb: The relationship of participant motives and experience level of mountaineering. *Journal of Leisure Research*, 17(3), 241-250.
- Farris, M. A. (1999). The effects of rock climbing on vegetation of three Minnesota Cliffs. *Canadian Journal of Botany*, 76(12), 1981-1990.
- Graydon, D. (1992). *Mountaineering: Freedom of the hills..* Seattle: Mountaineers Society.
- Gill J. (2000). *Origins of bouldering: The early days of the sport*. Retrieved December 8, 2007, from John Gill's Web site:
http://www128.pair.com/r3d4k7/Bouldering_History1.0.html
- Hockett, K. (2000). *The effectiveness of Two Interventions On Reducing Deer Behavior By Park Visitors*. Unpublished M.S. Thesis: Virginia Polytechnic Institute State and University, Blacksburg, VA
- Johnson, D. & Swearingen, T. (1988). *The effectiveness of selected trailside sign texts in deterring off-trail hiking at Paradise Meadow, Mount Rainier National Park*. In H.H Christensen, D.R. Johnson, & M.H. Brookes (Eds.), *Vandalism: Research, prevention, and social policy* (pp. 103-119). (General technical report PNW-GTR-293). Portland, OR: United States Department of Agriculture, Forest Service.
- Kling, R. & Gerson, E. (1978). Patterns of segmentation and intersection in the computing world. *Symbolic Interaction*, 1(2), 21-43.
- Long, J. (2004). *How to rock climb*. Guildford, CT: Falcon Publishing.
- Lutz, A. R., Simpson-Housely P. & De Man, A. F. (1999). Wilderness: rural and urban attitudes and perceptions. *Environment and Behavior*, 31(2), 259-266.
- Luebben, C. (2004). *Rock climbing: Mastering basic skills*. Seattle, WA: Mountaineers Society.
- Manfredo, M. J. (1992). *Influencing human behavior*. Champaign, IL: Sagamore Publishing.
- Marion, M. L., & Reid, S. E. (2007) Minimising visitor impacts to protected areas: The efficacy of low impact education programmes, *Journal of Sustainable Tourism*, 15(3), 5-27

- Marshall, G. (1994). *The Concise oxford dictionary of sociology*. Oxford: New York. Oxford University Press
- Nash, R. (1982). *Wilderness and the American mind*. New Haven: Yale University Press.
- McCool, S. F. & Cole, D. N. (2000). *Communicating minimum impact behavior with trailside bulletin boards: Visitor characteristics associated with effectiveness*. USDA Forest Service Proceedings RMRS-P-15.
- Peccia, R. (2001). *Transit Feasibility study: Red Rock Canyon National Conservation Area, Nevada*. Las Vegas: Bureau of Land Management.
- Reid, S. & Marion J. (2003). *The efficiency of visitor education programs*. Retrieved September 4, 2005, from Leave Not Trace Web site: www.int.org/teachingLNT/teachingpdffiles/inteducationeffectiveness.pdf
- Schuster, R. M., Thompson J. G., & Hammitt, W. E. (2001). Rock climbers' attitudes toward management of climbing and the use of bolts. *Environmental Management*, 28(3), 403-412.
- Sop Shin, W. & Jaakson, R., (1997). Wilderness quality and visitors' wilderness attitudes: Management implications. *Environmental Management*, 21(2), 225-232.
- Starkman, D. (2003, June 11). Bolts in rocks have climbers screaming from mountain tops. *The Wall Street Journal*. p. A1
- Stave, K. (1998). *Water, land, and people: The social ecology of conflict over New York City's watershed protection efforts in the Catskill Mountain Region, NY*. New Haven: Yale University Press.
- Strauss, A. (1984). Social worlds and their segmentation processes. *Symbolic Interactions*, 5, 123-139.
- Unruh, D. (1979). Characteristics and types of participation in social worlds. *Symbolic Interaction*, 2(2), 115-129,
- Watts, A. (1992). *Climbers guide to Smith Rock*. Evergreen, CO: Chockstone Press.
- Winters, P., Cialdini, R., Bator, R., Rhoads, K., & Sagarin, B. (1998). An analysis of normative messages in signs at recreation settings. *Journal of Interpretation Research*, 3(1), 39-47.
- Winter, P. (2005). *What is the best wording to use in signs? The impact of normative message types on off-trail hiking*. Riverside, CA: Pacific Northwest Research Station: United States Department of Agriculture, Forest Service.

Wirsching, A., Leung, L., & Attarian, A. (2003). *Swatting litter bugs: What agencies can do to decrease depreciative visitor behavior*. Retrieved September 4, 2008, from the National Recreation and Park Association Web site:
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