

“Keep the Stoke Up:”  
An Analysis of Skier Awareness and Attitudes Towards the Environment

A Thesis  
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On my honor  
I have neither given nor received  
unauthorized aid on this thesis.  
Emily A. Carlson  
Spring 2019

## ABSTRACT

Despite its massive popularity, the ski industry has several negative environmental and social impacts. The environmental effects that come with skiing often include deforestation, alteration and loss of habitat, overuse of water, air and water pollution, littering, contributions of emissions that lead to global climate change, and visual impacts from development. Socially, the industry is only available to a narrow, privileged demographic and creates gentrification and racial and income inequality in ski towns. This study surveyed students at an elite liberal arts college located near the mountains as a case study to evaluate their awareness of and action in response to concerns about the ski industry's environmental and social impacts. The study found that students are generally aware that the ski industry has negative impacts, but most do not intend to stop skiing because they enjoy the sport, skiing is a big part of their lifestyle and sense of self, or they want to be able to spend time with friends and family who ski.

I was fortunate to grow up in a beautiful town in the mountains, where life revolves around the ski industry. People are attracted to the town because of its beauty and long ski season. Most jobs stem from the ski industry, whether they are resort jobs or employment in the tourist industry, such as food and lodging. Thus, the economy and everything affected by it is dependent upon the health and recreational potential of the environment. It is engrained in us locals starting at a young age that we need to have years with consistently high snowfall, not only for our own skiing pleasure, but also because we need the tourism. Yet, we have a love-hate relationship with tourists. We rely on the money they bring to survive, but at the same time often resent them because the mass of mostly wealthy, white people coming to the mountains takes an environmental and social toll. It is ironic that the environment is the exact thing that attracts people, residents and tourists alike, yet it is being harmed by people's presence. If the harm continues, there will be nothing to attract people, and the community will not be able to exist.

The ski industry creates other social problems, such as gentrification and environmental racism favoring the white upper class and compromising the minority population, who often work the service jobs for little pay. The racial and economic inequality is alarming and prominent in the community. I constantly grapple with the paradox of loving to ski and having it be a part of my identity as a ski town local but resenting the negative environmental and social issues induced by the ski industry. We are a part of the ski culture yet have to understand that it has destructive tendencies. I grew up around these issues and they are familiar to me and my friends and family, but I wondered if others know about them. I attend an elite small liberal arts college, where skiing is a popular activity and the proximity to the mountains seems to be a major attraction to those who apply to the school. The students speak a lot about environmental and social issues, but what do they know about the real impact of their presence? Does anyone

change their actions because of their concerns? This study investigates the impacts of the ski industry, and students' awareness of and action in response to these impacts.

## LITERATURE REVIEW

In March of 2018, USA Today released an article titled "How do Ski Resorts Affect the Environment?" In the article, Mercer outlines some of the main environmental areas skiing impacts: alpine vegetation, watersheds, wildlife habitat, and soil erosion. In doing so, she brings to light some of the negative sides of the ski industry. By starting the article with a personal anecdote about her experience working as a customer satisfaction surveyor for Copper Mountain, she is able to show that the environmental impact of skiing is an issue about which people are increasingly concerned. Yet, even though people know that skiing is not good for the environment, and also has other implications such as environmental racism and inequality, many continue to participate. Thus, although there are benefits unique to the ski industry, there are also several negative impacts the industry has on towns and the environment that people have to come to terms with if they want to continue to ski.

### *Environmental Privilege*

Environmental racism is commonly discussed in the environmental and sociological literature. Frequently, when the topic is studied, it examines how minority and underprivileged populations often have undesirable environmental hazards located in or near their neighborhoods, or how developing and island countries will suffer disproportionately from climate change (Park and Pellow 2011). On the flip side of environmental racism, however, is environmental privilege, or the result of "the exercise of economic, political, and cultural power that some groups enjoy, which enables them exclusive access to coveted environmental amenities such as forests, parks, mountains, rivers, coastal property, open lands, and elite neighborhoods" (Park and Pellow 2011:4). Essentially, some people can enjoy environmental

benefits and escape costs whereas many people are not so fortunate. Skiing and the outdoor lifestyle in general are good examples of environmental privilege in practice. Park and Pellow (2011) highlight the discrepancy between the environmentally privileged and underprivileged by exploring the Roaring Fork Valley, home to extreme income and racial inequality. On the one hand, there are the extremely wealthy residents and part-time residents of Aspen, and on the other are those people, often immigrants, who provide services for the wealthy. The workers cannot afford to live in Aspen, and thus are forced to live further down the valley and do not have the time or resources to take advantage of living in the beautiful mountains. They are hardly paid a living wage, and often have to struggle to survive and support their families. This unfortunately is not unique to Aspen. The ski industry all over the world has come to rely on often non-white laborers who are paid low wages (Coleman 1996; Clifford 2002; Park and Pellow 2011). The irony, however, is in what Park and Pellow (2011) deem the “Aspen Logic.” This ideology assumes that capitalism and environmentalism go hand in hand, and it is overpopulation that is causing the environmental issues rather than the practice of overconsumption. This, according to Park and Pellow (2011), is inherently racist because in assuming that overpopulation is the root of environmental problems, the wealthy place the blame on immigrants and thus distance themselves from environmental responsibility. Clifford (2002) explains that the companies who run the ski industry do not care about the living conditions of their workers especially if they do not reside in the ski town itself, because the less than favorable conditions are not visible to paying customers, and thus don’t affect the company’s image. The companies work hard to keep up appearances and sell the tourist experience.

Skiing is the main attraction to mountain towns such as Aspen and is a partial reason for the extremely white, wealthy, and elite population of the town. According to Coleman (1996), skiing idealizes a particular Eurocentric construction of whiteness that places people of color on

the periphery. She explains how traditional ads for skiing have helped to create a specific and narrow ski culture built on “beauty, fashion, leisure, health and athleticism” through images of white, blond, and athletic people socializing with members of the opposite sex, thus creating an image of skiing that is very white, wealthy, and heteronormative. Park and Pellow (2011) support this claim with their own examples of ads for Aspen skiing that marketed the town as an exclusive space for the elite class to “rejuvenate their minds, bodies, and spirits” (p. 84). The ads also called Aspen the “Switzerland of Colorado” and emphasized its European-like ecological beauty. According to Coleman (1996), this is not unique. She explains that the ski culture around the United States, and specifically the West, is somewhat obsessed with its European roots, and thus tries to be as European as possible, often referring to the Colorado Rocky Mountains as “the other Alps” (p. 593). Clifford (2002) explains that when ski areas do have immigrants in the more “visible” jobs such as teaching skiing or working in front desks, they are from places like Sweden and Australia, and thus keep up the white, privileged ski imagery.

This fascination with the European aesthetic makes it hard for minorities to exist in the space. Cavin (2008) details the disparity between white and non-white people in the outdoors, explaining how people avoid visiting spaces that have been historically off-limits for them. Even though there are certainly African Americans or people from other minority races and ethnicities who have the means to participate in outdoor sport, they have not been socialized to visit the wilderness or participate in sports like skiing (Cavin 2008; Park and Pellow 2011). Cavin (2008) lists “reservations of family and friends, collective memory and fear, being the only one, discrimination and reverse curiosity, assumption of novice status, and balancing identity between being Black and ‘acting White’” as the main barriers that keep the black population away from outdoor sports and activities (p. 109). Additionally, the racial wealth gap prevents people from being able to participate in sports that require expensive equipment or for which (sometimes

extensive) travel is required. The high cost of skiing through travel, equipment, lift tickets, and lessons, is a major barrier that helps it remain a white, privileged sport that is inaccessible to many (Clifford 2002; Cavin 2008; Park and Pellow 2011; Stoddart 2011).

### *Environmental Impacts of Upper-Class Sports*

Throughout history, the elite class has engaged in sports that require time, expensive equipment, special facilities, and sometimes extensive travel, and thus are inaccessible to people of lower social rank (Riess 1997). According to Riess (1997), sport opened a new set of activities where the rich could create and enforce customs. Some such sports include golf and skiing (Wilson 2002). These sports can be harsh on the environment, in spite of the fact that they both rely on the environment, because they require a lot of space and resources. For example, golf is environmentally impactful because it changes and shapes the land, requiring huge amounts of chemical fertilizers and water for irrigation to maintain the prestigious golf courses the media has made the norm (Wheeler and Nauright 2006). This is certainly not sustainable. Wheeler and Nauright (2006) explain how golf is perceived to be linked with nature, yet construction of courses often consists of “clearing natural vegetation and deforestation, destruction of natural landscapes and habitats and changes in local topography and hydrology” (p. 431). They also discuss how golf courses can have negative impacts on wildlife due to habitat loss, disrupted aquatic communities, and chemical exposure. The environment is compromised to accommodate the prestigious standards and expectations of the wealthy who participate in the sport.

Skiing similarly has negative impacts on the environment. The effects that come with skiing often include deforestation, alteration and loss of habitat, overuse of water, air and water pollution, littering, contributions of emissions that lead to global climate change, and visual impacts from development (Holden 2000, Clifford 2002; Stoddart 2011; Childers 2012). Clifford (2002) and Childers (2012) describe various instances when crucial wildlife habitat was taken

away by ski development. For example, in the creation of the Beaver Creek Resort, many acres of elk habitat were taken away in order to create ski runs. This displaced thousands of elk, who had to migrate to other areas, imposing themselves on mule deer territory. This was problematic for the deer because they had a hard time competing, and thus the entire ecosystem was disturbed. Clifford (2002) explains that wildlife displacement is problematic because there is no “empty” land for wildlife to be pushed into when they are forced out of their natural habitat by development (p. 164). Childers (2012) adds to the controversy surrounding the expansion of ski areas by using the case study of the construction of Vail’s Blue Sky Basin, which necessitated the destruction of 885 acres of expansion into Canadian lynx’s habitat (p. 1). This was especially concerning because the lynx was an endangered species. Additionally, Clifford (2002) explains that it is not just the development of the ski area itself, but also the development stemming from the economic growth brought by ski areas. Ski areas foster a construction economy, and many of these houses and other structures also contribute to deforestation and habitat destruction. Clifford (2002) makes the claim that “...it is difficult to find a Colorado valley being filled with sprawl and new development that is not also close to a ski resort; it is impossible to find a major ski area that is not associated with sprawl and its attendant environmental masses” (p. 166).

Clifford (2002) and Childers (2012) each make a point to examine the role of the Forest Service in the ski industry. Both note the irony that the service has come to partner and mutually benefit with the industry which it is supposed to regulate. Clifford (2002) even goes so far as to claim that “The Forest Service is no longer capable of acting as a steward of public lands” (p. 137). The Forest Service has joined the recreation industry after leaving the logging industry, and because a significant portion of its money comes from recreation, the service profits from more use. Therefore, they do not effectively protect and advocate for public lands. In more than one

case, the EPA has had to step in to regulate the ski industry and reduce the environmental risks it poses, a job which is supposed to be done by the Forest Service.

Another significant negative environmental impact of the ski industry is use of water (Clifford 2002). Snowmaking is the main practice that requires huge amounts of water and energy. Snowmaking takes water out of its natural watershed pattern by drawing it from rivers or streams and converting it to snow that will remain in the area until it melts in the spring. Additionally, the water quality is often compromised because of ski wax, litter, road salts, and other contaminants (Holden 2000). Clifford (2002) uses Keystone, Colorado as a case study, where snowmaking spreads mining remnants into previously clean water. This is harmful not only to the ecosystems, but also to humans who consume the water. Although the water does re-enter the watershed, it is altered and its quality is often compromised.

Perhaps one of the most impactful effects of the ski industry on the environment is its contribution to climate change. Ski areas need to power their chairlifts, snowmobiles, snowcats, snowmaking processes, and lodges. All of these require a lot of electricity, much of which is coal powered (Clifford 2002). Clifford (2002) explains that people on vacation often have a mindset of “treating themselves” and so are less likely to be conscious about making decisions that are less harmful to the environment, because they want to splurge while they visit a ski paradise. Thus, a lot of energy goes into services that would not be present in towns without ski resorts.

According to Stoddart (2011), automobility has been responsible for a huge amount of emissions that contribute to climate change. He explains that most people do not live in close proximity with a ski area, so they have to drive or even fly to be able to ski. The mass numbers of people driving or flying to ski areas is responsible for a lot of emissions. Clifford (2002) and Childers (2012) both discuss the implications of the construction of Interstate 70 through the state of Colorado, allowing easier access to the ski towns. Childers (2012) claims that the road

created an “urban corridor” and helped bolster the ski industry (p. 40). In addition to the economy, however, the road also contributed to an increase in emissions, habitat destruction, road kill, and overall environmental impacts due to increased accessibility of skiing to larger populations.

### *The Ski Economy*

Sandford (2008) and Holden (2000) draw parallels between ecology and economy in mountain towns, noting that while the economy often relies on the ecological beauty and opportunity, the influx of tourism and elite culture has negative impacts on both the environment and the communities. Sandford (2008) is concerned with the environment, character, and integrity of towns in the Rocky Mountains and wants to maintain healthy communities that are not “Aspenized,” which according to Park and Pellow (2011), means to “destroy a nice little ski town with conspicuous wealth, development, and self-indulgence” (p. 35). Although Aspen may be an extreme case, it is certainly not alone in its economic reliance on and integration with the ski industry. Clifford (2002) explains how many Colorado ski towns, including Breckenridge, Steamboat Springs, and Vail, are “company towns” where the entire economy of the town is reliant on the ski industry. He cautions that this is dangerous because if something were to happen to the ski area, it would be disastrous for the towns. Childers (2012) adds that ski resorts have huge influence and power over “local and regional economies, identities, and environments” (p. 4).

This is not necessarily all bad. The economies in the towns have grown and allowed more people to enjoy the mountains. The industry has created many jobs and decreased unemployment levels in the mountain towns (National Ski Areas Association 2016). The problem comes, rather, in the commodification of the ski culture. Clifford (2002) and Childers (2012) argue that the

excessive vacation culture is growing, marginalizing skiing as a sport, displacing locals, creating more social inequality, and harming the environment.

### *Skier Attitudes Towards the Environment*

Skiers often care about the environment, and some of the first environmentalists were skiers (Clifford 2002). However, the ski industry itself has negative environmental impacts (Holden 2000; Clifford 2002; Sandford 2008; Park and Pellow 2011; Stoddart 2011). Thus, many environmentalists participate willingly and even enthusiastically in an activity which is known to compromise the integrity of the thing they hold dear: the environment. Holden's (2000) study looks at skier attitudes towards the environment at the Cairngorm resort in Scotland. He found that skiers can either be unaware of the damage the sport causes or are in some form of denial because they like to ski and do not want to experience cognitive dissonance from engaging in an activity which has implications to which they are morally opposed. He also found that knowledge about the ecosystem of Cairngorm is limited, but that people did want to learn and know more about the environment where they ski. The ski market itself has not been quick to explain the environmental impacts it has, and thus people are easily able to avoid responsibility. Similar to the situation in Aspen, the environmentally privileged often place blame elsewhere, or ignore the problem completely. Clifford (2002) echoes this sentiment, explaining that while it may be easy for environmentalists to blame others for the problems, many find it harder to recognize that they themselves are part of the problem.

Stoddart (2011) explains the concept of ecological irony, which refers to the fact that activities that rely on the environment can also contribute to the environment's demise. Skiing, for example, relies on snow and cold temperatures to thrive. However, it also adds to its own threat by contributing to climate change, which has been projected to shorten winters and reduce snowpack in states like Colorado, Montana, Utah, and Vermont. He found that skiers recognized

the tension in skiing; they value the sport partially because it brings them closer to nature, but in skiing they threaten their future ability to ski. Stoddart (2011) argued that individual acts of ecological citizenship or stewardship are valuable but advocated strongly for political actions on climate change. Childers (2012) adds that the public's love for skiing does not show signs of slowing down soon, which will propel expansion in the industry and lead to further environmental costs.

According to Norgaard (2003), the problem with inaction in regard to the environment, and specifically climate change, is not just that people do not have enough information, but that they are in denial because feel helpless, guilty, and fearful of the threat that climate change poses to individual and collective senses of identity. Her study looks at Norwegians, whom she characterizes as simple, humble, and nature loving, spending holidays skiing or otherwise recreating in the mountains. She found that individuals were concerned about climate change, but it was not a topic people were able to easily speak about, partially as a result of guilt and feeling overwhelmed by the scale of the issue at hand. People did not want to feel bad about themselves, and thus preferred a state of denial. This can certainly be related to the ski problem, because people want to do what they like to do with a clear conscious.

### *Role Conflict and Competing Values*

The situation in which many environmentalist skiers find themselves can be partially characterized by the concept of role conflict. This concept is based in the ideology that people are actors who fill social roles. Getzels and Guba (1954) explain the concept by defining the term "actor" as "the individual considered in abstraction from his personality and roles," the term "role" as "the set of complementary expectations regarding the actor in his interaction with other individuals," and "personality" as "the system of need-dispositions reacting to the alternatives presented by the existence of the different roles," and explains that an actor's behavior is a

function of role and personality (p. 164). Goffman (1959) furthers this ideology in his explanations of roles. He claims that all individuals are always playing a role and put on a mask of who they want to be. He also theorizes about the idealized presentation of self. He believes that when a person presents oneself to others, they tend to incorporate and exemplify the values of the society more than their behavior does as a whole (Goffman 1959). This suggests that people will act differently in societies with different values and try to present themselves as an exemplar of said values, even if their actions do not mirror that presentation of self. However, Goffman (1959) suggests, in order to actually be a given type of person, one must not only have the attributes, but also “sustain the standards of conduct and appearance that one’s social grouping attaches thereto” (p. 75).

Getzels and Guba (1954) define role conflict as situations in which “an actor is required to fill simultaneously two or more roles that present inconsistent, contradictory, or even mutually exclusive expectations” (p. 164). This presents the actor with the choices of abandoning one role, finding compromise, or abandoning both roles. Rizzo, House, and Lirtzman (1970) add that role conflict leads to stress, dissatisfaction, and decreased organizational effectiveness.

This theory can be applied to the present study because environmentalists who live in the West are likely to feel some role conflict. On the one hand, they present themselves as environmentalists who want to protect the natural world, but on the other, living as a member of a capitalist society necessitates a certain amount of pollution and environmental destruction and thus simultaneously play conflicting roles as the protector and the polluter. According to Rizzo et al. (1970), this ambiguity in roles can be somewhat paralyzing, and it becomes hard for people to act effectively when they are feeling stress resulting from role conflict.

Another way to look at the problem is through the ideology of contradicting values. Weber (1920) argues that each person has internalized value spheres (religion, economy, politics,

aesthetics, erotic, and intellectualism) from which they draw their rationality and actions. He explains that these value spheres tend to become autonomous domains of thought and action, following their own rules and thus creating conflict between each other. Tension between spheres stem from self-knowledge and understanding (Oakes 2003). This means that as people understand themselves better, they can see the oppositions in their values. The tension is inescapable but often leads to change in one of the value spheres to try to align with other values. This again can be applied to the current study because it is likely that people will recognize their contradicting values and feel the tension that stems from that conflict.

McIntyre (2008) ties the ideas of beliefs (what people think is real) and values (abstract ideas about what is good and desirable in a society) together because people often form their values around beliefs or cling to beliefs because they are in line with their values (p. 107). In this case, it may be that skiers value the ability to ski to enjoy the outdoors, be with friends and family, or exercise. However, this may contradict their environmental beliefs and values. McIntyre (2008) explains that the abstractness of values can create conflict because applying them to the real world is difficult. While people may have certain values, the way the values play out in their life may be complicated and cause internal conflict. Thus, she says, people need to find ways to balance values, beliefs, and actions. This paper looks at an elite liberal arts college's students' awareness of and attitude toward the environmental and social impacts of ski industry.

## METHODS

This study investigates how skiers at an elite liberal arts college interpret and act upon connections between skiing and environmental and social harm. The school used as a case study was chosen due to its elitism, outdoorsy campus culture, proximity to the mountains and ski resorts, and relatively high environmental and social awareness. Many students at the school come from an elite social class. Almost 70 percent of the school is white, and about 78 percent

come from the top 20 percent of the income spectrum (The New York Times 2017). On the welcome page of the college's website, breaks are promoted as days to explore the outdoors in the mountains. Thus, it can be said that the college aims to attract students who are active in the outdoors. One popular activity among students is skiing. The school advertises that it is only a couple hours from some prominent ski resorts, which can be a huge draw for prospective students.

Using the college as a case study facilitates the investigation of individuals who can be characterized in general as intelligent and socially and environmentally aware. This study tests the hypothesis that skiers at the college have strong environmental and social beliefs but limited concrete knowledge surrounding the environmental and social impacts of the ski industry; and skiers at the college do not act to alleviate their contradicting beliefs and actions.

A survey (see Appendix) was distributed to 969 random student emails. There were 248 responses, which is a 35.6 percent response rate. The survey asked respondents to rank their top three reasons for attending the school to see if the outdoorsy culture and location near the mountains did indeed attract students, and specifically student skiers. Students were also asked to indicate outdoor sports in which they have participated, with the goal to see whether there are patterns between outdoor recreation and environmental and social awareness. Golf was included because it has similarities to skiing in that both are upper class sports that are destructive to the environment. People were asked about whether they were from a place that is within a couple hours of a ski resort or if they have access to such a place because that would suggest that they could theoretically ski more because they do not have to travel as much per day in order to ski.

Questions posed to assess environmental beliefs, specifically those related to skiing, were borrowed or modeled on questions from Holden's 2000 study that investigated skier attitudes towards the environment in Cairngorm, Scotland. After, a list of some main concerns was

provided, and respondents were asked to rank the concerns based on what they found most alarming in order to assess what they would be most worried about when told examples of negative impacts. The last question asks respondents how they balance their concerns with their desire to ski in order to operationalize the concepts of ecological irony, role conflict, and contradictory feelings, and tries to understand how people internally resolve these tensions.

### *Methods of Analysis*

When preparing the variables for tests, dummy variables were created for demographics that might be related to the question, including race (white or person of color), gender (male and non-male), age (upper- or lower-classmen), and country (United States or international). Dummy variables were also created for ability to identify environmental and social concerns. A composite variable was created for the number of outdoor sports in which one participates to have a more comprehensive value for outdoor sport participation. School statistics for the descriptive table were obtained through the college's Office of Institutional Planning. Ordered logistic regressions were run on all of the Likert scale questions including gender, class, and race. An open-ended question allowed respondents to explain how they balance their environmental and social concerns with their desire to ski. Responses were coded for any patterns.

### FINDINGS

Table 1 reports the descriptive statistics for the sample population, the school's population, and the sample of skiers and non-skiers. The last column shows the Cramer's V score, which represents a cross tabulation test of the demographic variable with participation in downhill skiing or snowboarding. The survey sample cannot be generalized to the school or general public because it is not perfectly representative. However, the sample is sufficient as a pilot study. There is a diverse sample, though women and white respondents are overrepresented.

However, the other populations are more consistent with the Colorado College population. Race, financial aid, and home country have significant effects on participation in downhill skiing or snowboarding. White people, full pay students, and U.S. students were all more likely to ski.

**Table 1: Descriptive Statistics in Percent (n) and Cramer's V Scores**

	All	School	Skiers	Non-skiers	Cramer's V
<b>Gender</b>					
Male	66.4 (83)	45 (993)	33.3 (62)	35 (21)	--
Non-male	33.6 (184)	55 (1,191)	66.7 (124)	65 (39)	--
Total	(247)	(2,184)	(186)	(60)	n.s.
<b>Race/ Ethnicity</b>					
white only	74.5 (184)	67.4 (1,472)	85 (158)	42.2 (26)	--
black	2.7 (58)	4.5 (11)	3.2 (6)	8.3 (5)	--
Native American/Indigenous	2 (5)	2.4 (53)	0	8.3 (5)	--
Hispanic	11.7 (29)	9 (196)	5.4 (10)	30 (18)	--
Asian/ Asian American	8.5 (21)	11.1 (243)	5.9 (11)	16.7 (10)	--
Total	(297)	(1,975)	(185)	(64)	.42***
<b>Financial Aid</b>					
None	57.1 (141)	56.3 (1,230)	64.5 (120)	35 (21)	--
Less than half	8.9 (22)	--	9.1 (17)	8.91 (22)	--
About half	4.9 (12)	--	6.45 (12)	--	--
More than half but not all	20.7 (51)	--	17.2 (32)	30 (18)	--
Full	8.5 (21)	--	2.69 (5)	26.7 (16)	--
Total	(247)	(2,184)	(186)	(60)	.43***
<b>Year</b>					
First Year	24.7 (61)	26.6 (580)	25.8 (48)	20 (12)	--
Sophomore	25.9 (64)	22.4 (489)	28 (52)	20 (12)	--
Junior	23.5 (58)	23.4 (511)	21 (39)	31.7 (19)	--
Senior	25.9 (64)	27.7 (604)	25.3 (47)	28.3 (17)	--
Total	(247)	(2,184)	(186)	(60)	n.s.
<b>Major</b>					
Humanities	23.5 (58)	8.7 (191)	22 (41)	28.3 (17)	--
Social Science	26.7 (66)	13.4 (292)	28.5 (53)	21.7 (13)	--
Natural Science	20.4 (75)	19 (414)	29 (54)	35 (21)	--
Interdisciplinary	10.1 (25)	6.5 (142)	29 (54)	35 (21)	--
Total	(244)	(1039)	166	58	n.s.
<b>Home</b>					
Colorado	15.4 (38)	15 (327)	14 (26)	20 (12)	--
U.S. (not CO)	72.5 (179)	75.3 (1,646)	76.9 (143)	58.3 (35)	--
International	10.1 (25)	9.7 (211)	8 (15)	16.67 (10)	--
Total	(242)	(2,184)	(184)	(57)	.13*

*Values for Race may not equal 100 percent, as participants may have identified with multiple races*

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Mann-Whitney comparison of means tests were run to examine the relationships between skiers and non-skiers in their attraction to the college. It was found that the culture of the college, which can be characterized as outdoorsy, was more important to skiers than to non-skiers. On

average, skiers ranked college culture as 3.86 in importance (1 being most important), whereas non-skiers ranked it lower, at 4.5. The Mann-Whitney test shows that this is a significant difference ( $U = 4305$ ,  $p \leq .001$ ). Additionally, a Spearman's rho test was run to test the correlation between financial aid and outdoor sport participation and found that they are negatively correlated ( $r_s = -0.22$ ,  $p = .0006$ ), meaning that upper class students more often participate in more outdoor sports.

**Table 2: Averages of Skier Attitudes Towards the Environment**

	Female	Male	U	white	POC	U
Env.concern	4.03	3.69	2464.0**	3.93	3.82	1502.5
Pro- Dev.	2.41	2.78	2487.0*	2.46	2.95	1244.5
No Harm	1.97	2.35	2412.5**	2.09	2.18	1510.5
Stop Ski	2.73	2.40	2376.0**	2.57	3.00	1218.5*
Out. sports	3.98	4.40	3119.0*	4.10	4.22	2027.5

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table 2 reports the average scores for skier attitudes towards the environment and the corresponding U value. The table also includes the number of outdoor sports in which the respondent participates because it gives a value for how “outdoorsy” the respondent is. These were tested against gender, race, and class. However, gender and race were the only independent variables that are correlated with attitudes towards the environment. It was found that gender has an effect on environmental concern ( $U = 2464$ ,  $p \leq .01$ ) with females ( $M = 4.03$ ) having more environmental concern than males ( $M = 3.69$ ), pro-ski- development ( $U = 2487$ ,  $p \leq .05$ ) with males ( $M = 2.78$ ) being more pro-development than females ( $M = 2.41$ ), no harm on the environment ( $U = 2412.5$ ,  $p \leq .01$ ) with males ( $M = 2.35$ ) believing this more strongly than females ( $M = 1.97$ ) believing this, willingness to stop skiing ( $U = 2376$ ,  $p \leq .01$ ) with females ( $M = 2.73$ ) being more willing to stop skiing than males ( $M = 2.40$ ), and the number of outdoor sports in which the respondent participates ( $U = 3119$ ,  $p \leq .05$ ) with males ( $M = 4.40$ ) participating in more outdoor sports on average than females ( $M = 3.98$ ). It was also found that

race is correlated with willingness to stop skiing ( $U = 1218.5$ ,  $p \leq .05$ ) with people of color ( $M = 3.00$ ) being more willing to stop than white people ( $M = 2.57$ ).

**Table 3: Logistic Regression Results for Downhill Skiing and Snowboarding**

	Model 1	Model 2	Model 3	Model 4
White/ POC	7.73*** (2.63)	5.45*** (2.13)		6.30** (3.99)
Financial Aid				
Less than half		0.81 (0.51)		0.65 (0.5)
More than half		0.60 (0.26)		0.23* (0.15)
All		0.13** (0.08)		0.09* (0.09)
Age			0.61 (0.27)	0.54 (0.28)
Female			2.72* (1.33)	2.46 (1.40)
Home near ski resort			4.48** (2.05)	4.27* (2.44)
Outdoor sport num.			4.14*** (0.84)	5.41*** (1.54)
Observations	240	228	240	228

Exponentiated coefficients; Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table 3 reports the odds ratios generated by logistic regressions to test what groups are more likely to participate in downhill skiing or snowboarding. The two primary variables of interest are race and class. Model 1 shows that race has a statistically significant positive effect on the likelihood that the participant skis ( $OR = 7.73$ ,  $p = .000$ ). Model 2 incorporates class, with full-pay students used as a reference group. When this variable is added, there is a decline in odds ratio for race, which decreases to 5.45, but the relationship remains statistically significant ( $p = .000$ ). The model shows that the lower income students are 87 percent less likely to ski than the upper income students who receive no financial aid. Model 3 leaves out the two primary variables of interest, but adds other independent variables including gender, year in school, whether the participant lives within a couple hours of a ski resort, and how many outdoor sports in which the student participates. Females were 2.72 times more likely to ski than males ( $p =$

.04). If a person grew up within a couple hours of a ski resort, they were 4.48 times more likely to ski ( $p = .001$ ). Additionally, if a person participated in more outdoor sports, they were 4.14 times more likely to ski than those who participated in fewer outdoor sports. Model 4 incorporates the control variables with the primary variables of interest. With the addition of the control variables, the effect of race has an odds ratio of 6.3 ( $p = .004$ ). Lower class students again proved to be less likely to ski, with those receiving more than half of tuition and fees in aid being 77 percent less likely to ski than upper class students, and lower-class students receiving full financial aid being 89 percent less likely to ski than upper class students. Age and gender did not have an effect on likelihood to ski, but living within a couple hours of a ski resort meant that respondents were 4.27 times more likely to ski than those who do not ( $p = .011$ ). Additionally, if a respondent participates in more outdoor sports, they are more likely to ski (OR = 5.41,  $p = .000$ ).

**Table 4: Odds Ratios for Skier Attitudes Towards the Environment**

	Env. Concern	No Harm	Stop Ski	Ident env. con.	Ident soc. con.
White/ POC	1.58 (0.73)	0.83 (0.38)	0.48 (0.22)	3.23** (1.36)	2.08 (0.88)
Less than half aid	0.62 (0.32)	1.34 (0.65)	1.55 (0.81)	0.55 (0.28)	0.56 (0.29)
About half aid	2.93 (1.85)	1.65 (1.01)	0.99 (0.61)	4.07 (3.10)	6.92* (5.88)
More than half aid	1.17 (0.53)	1.63 (0.71)	1.79 (0.78)	0.66 (0.27)	0.58 (0.24)
Full aid	4.69 (4.21)	0.26 (0.23)	1.91 (1.50)	0.76 (0.54)	0.80 (0.54)
Female	2.45* (0.85)	0.43* (0.14)	2.66** (0.91)	1.09 (0.34)	1.42 (0.45)
Home near ski resort	1.08 (0.37)	0.67 (0.22)	0.57 (0.19)	1.56 (0.48)	2.12* (0.67)
Out. sport num.	1.06 (0.13)	1.23 (0.14)	0.91 (0.10)	1.63*** (0.17)	1.54*** (0.16)
Observations	171	171	170	245	245

Exponentiated coefficients; Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table 4 reports the odds ratios for demographics tested against environmental values and attitudes. Ordered logistic regressions were run on environmental attitudes, and logistic regressions were run with the dummy variables identifying social and environmental concerns. The first Model examines the effects of various demographics on concern for environmental issues. Only gender has an effect on these concerns, with females being 2.45 times more likely to care about environmental issues than males ( $p = .010$ ). The second model tests the same control variables to see how they contribute to the belief that skiing does no environmental harm. Again, only gender has an effect, with males being 57 percent more likely to hold this belief ( $p = .010$ ). The third model displays the test of the control factors against willingness to stop skiing. Yet again, only gender has an effect, with females being 2.66 times more likely to stop skiing ( $p = .005$ ). The fifth model shows the results from a logistic regression on the ability to identify an environmental concern regarding the ski industry. This model reports that race has an effect, with white skiers being 3.23 times more likely to be able to identify an environmental concern ( $p = .005$ ). Additionally, if a person participates in more outdoor sports, they are more likely to be able to identify an environmental concern. The last model reports the odds ratios for the ability to identify a social concern regarding the ski industry. The model shows that skiers with half financial aid are more likely to be able to identify social concerns ( $OR = 6.92, p = .023$ ). However, it is important to note that there are only 12 respondents who receive half financial aid and ski, so the results may be affected by the small sample. The model also shows that those who live within a couple hours of a ski resort are 2.12 times more likely to be able to identify a social implication of the ski industry ( $p = .017$ ). Again, participation in outdoor sports meant that a respondent would be more likely to be able to identify a social concern ( $OR = 1.54, p = .000$ ).

### *Qualitative Findings*

The last question of the survey asked skiers what they do to balance their environmental concerns with their desire to ski. Of the 247 students who responded to the survey, 61.5 percent (n = 152) answered this question. The responses included a few patterns, including those who do not ski, rationalization for skiing, and those who do not know how or why to balance their desire to ski with their concerns.

Seventeen percent of the sample (n = 26) clarified that they are not really skiers. Perhaps they have gone once or twice in their life, but they did not consider themselves to be regular skiers. Many of them wrote only that they did not ski and used that as justification, citing their lack of desire to ski. According to the survey, 23 percent of participants (n = 35) indicated that they had only skied once or twice in their life, and there were several participants who did not answer the last question of the survey.

The most frequent response was some form of rationalization for their decision to ski or descriptions of tradeoffs they recognize. Several mentioned the economic benefits they felt the ski area create or acknowledged that they were bringing money into ski towns. Many respondents within this category discussed their actions to off-set the negative impacts they support and contribute to by skiing. These actions include carpooling, planting trees, or vague answers such as “making environmentally conscious decisions,” or “make up for the damage in other areas of my life.” In fact, seven respondents mentioned that they carpoled to reduce their impact. Nine respondents mentioned backcountry skiing as a more environmentally friendly alternative that they enjoy or want to get more involved with in the future.

Another theme that was quite prominent was that respondents claimed that getting people into the outdoors would foster more stewardship. This would be valuable, they argued, in sparking more action. Others wrote more about increasing equity in the industry. They explained

that they wanted to work to make the outdoors and specifically the ski industry more accessible to more people because they recognized the cost and racial barriers to the sport. However, few of these respondents mentioned ways in which they were acting as environmental stewards or social advocates. In fact, only three respondents mentioned some concrete form of activism. One respondent said that they write letters to companies encouraging “increased public transportation to and from resorts and voicing other concerns.” Another claimed to dedicate their career to combating climate change and educating others. The third such respondent said that they were working with organizations in Summit County, a prominent ski community, that address these issues. Although there were others who said they would carpool or “try not to litter on the slopes,” these three activist responses tried to get at the system problems while also acknowledging that they contribute to the issues through their participation in the ski industry.

Several others rationalized their desire to ski by mentioning the greater impacts of other activities or systems. One response characterized this pattern, saying “There are probably plenty of things I do that are worse than the effects of skiing.” Others expressed their belief that there are downsides to most industries. This thought is connected to another pattern found in the responses, which was to blame the systems in place and discount the power of individual action. Thirteen percent of respondents ( $n = 20$ ) expressed belief that their individual actions would not do much to combat the issues, but rather they wanted the ski industry itself to make the changes, believing they would not make a difference if they stopped skiing because the infrastructure is already there, or acknowledging that the system was so interwoven with the economy and capitalist way of life that they had no hope for change. Several respondents mentioned that they believed ski areas should stop making snow, and instead rely on natural snow. People felt as if they cannot make a difference and that perhaps it is not their responsibility, but the ski

industry's. One quote summarizes this sentiment, saying "Just because I don't ski doesn't mean a change will be made; others will continue to ski and the industry will go on."

There were also many responses in which people claimed that they would balance their desire to ski with the negative impacts by "being aware" that those impacts exist or following rules such as staying on trails or not littering. This largely passive approach was taken by 20 respondents, or 13 percent of the sample. Several respondents said they would reconsider or that "people should consider" the costs and benefits of skiing when deciding how much they want to participate in the sport. They thus tried to justify their behavior by acting with a more knowledgeable and mindful approach. Others claimed to research ski areas to be able to make informed decisions on where to ski to minimize their impacts. Some said that they only ski at resorts that make minimal environmental impacts. This is connected to the "be aware" mindset because they still participate in the activity but do so in a more mindful manner. People also expressed interest in having more education for themselves and the general population about these issues. One respondent said, "I think the environmental concerns should be made more known. Especially if everyone at [the college] is as environmental as they claim to be." In this, they recognize the contradictions present and express desire to know more about the issues at hand.

Fifteen percent of respondents ( $n = 23$ ) said that they do or will minimize the amount that they ski because of the environmental and social impacts of the industry. One person made a connection between other environmentally harmful practices in which people like to participate, saying "Like eating meat, skiing should be a rare activity." Others mentioned that skiing was too expensive to participate in frequently anyways. They used phrases such as "even if I could afford it..." to indicate that they cannot regularly participate in the sport due to cost, but also make an effort to reflect on the impacts the industry has. Many respondents acknowledged that they had

not thought about the consequences much and claimed that in the future they would ski less. Others claimed that going forward, they would look for ways to be less impactful. However, many of them used language such as “it makes me want to...” or “I would like to...” instead of a more definitive “I will.” This is again a passive approach that shows that while people are aware of and willing to acknowledge the negative impacts, they are not ready to commit to make a difference or are not confident that their changes would have a real impact.

Eleven percent of respondents (n = 16) were willing to admit that they did not know how to balance their desire to ski with their environmental and social concerns. This did not mean that they did not care about the impacts, but perhaps they felt overwhelmed by the issue and do not know what they as an individual can do. Several people acknowledged that skiing is a part of their identity, family traditions, or sense of belonging, and felt they would be giving up a part of themselves in making changes in their ski habits. Many of these individuals expressed feelings of tension and contradictions in values with their desire to keep skiing but also deep care for the environment and desire to protect it. One quote from a respondent describes this sentiment;

Snowboarding is a selfish sport with a high cost on the environment. It's impossible to justify its negative impacts on the earth. It's fun, fulfilling, and contributes to the economy, but you shouldn't ski/snowboard if you care about the environment. I shouldn't snowboard, but I don't plan on quitting anytime soon. It's too much fun.

This quote encompasses several of the themes present in the responses. The respondent acknowledged that they act to serve themselves in doing this sport, justified the actions briefly by giving examples of its positive impacts, but then returned to the tension stemming from contradiction in values that is a result of the knowledge that it is bad but strong desire to participate anyways. Some of the respondents who mentioned or alluded to this tension reference ways in which they try to combat it, and others admitted that they do not try to balance their

desire to ski with their concerns about its impacts. Again, within this group, there were those who expressed financial concerns. One respondent commented that they would like to stay in the ski towns to reduce driving but cannot afford to. There were also several respondents who gave short answers, such as “I don’t [balance the concerns with their desire to ski],” or “Skiing is fun.” These people did not express discomfort from contradictions of values. One respondent became defensive, saying that it seemed like a “loaded question,” acknowledging that skiing contributes to climate change, and concluding by commenting to “Keep the stoke up,” meaning to remain enthusiastic about skiing. This response shows that many people are perhaps not ready to make changes in their behavior and are offended by somebody even suggesting that change is something they might consider. This respondent is firmly stuck in their ways, and perhaps is even proud of their lifestyle, even if they are aware of the negative effects their actions may have.

## DISCUSSION AND CONCLUSION

Skiing has traditionally been a sport which is only accessible to the privileged, specifically the white upper class (Coleman 1996, Clifford 2002, Cavin 2008, Park and Pellow 2011). This study’s sample is consistent with the broader population in that the white and wealthy dominate the ski culture and outdoor space in general. The results of the logistic regression show that white students are more than 6 times more likely to ski than people of color, and upper-class students are up to 87 percent more likely to ski than lower class students. The Spearman’s rho test showed that amount of aid received is negatively correlated to the number of outdoor sports in which a respondent participates. Thus, the outdoorsy lifestyle is one which is more accessible to those in higher classes. This is consistent with previous research, and shows that the college, though it has programs to make the outdoors accessible to all, reflects the general population in the demographics of those who ski. The study also showed that skiers are

attracted to the college's culture, which is often characterized as outdoorsy and liberal. Because the skiers are generally white and upper class, the college's culture may be more familiar and comfortable to students within those demographics and thus may be less inclusive to those who do not fit within such boundaries.

The fact that a composite environmental concern variable could not be created due to inconsistency in the way respondents answered questions about their environmental beliefs suggests that there are multiple ways to think about environmental issues, and specifically those related to skiing. However, the study does show that non-male students who ski are generally more likely to express concern for environmental issues and agree with anti-development and anti-harm sentiments. This was consistent even when control variables were added, which suggests that non-males at the college have stronger environmental concerns. This is significant because non-male students are traditionally less privileged due to the nature of the patriarchal society that suppresses non-males (Chafetz 1988). This aligns with ecofeminist ideologies, which suggest that there are important connections between systems of oppression, specifically those of women and the environment (Warren 2012). This ideology would suggest that there needs to be systemic change to make positive differences. The fact that non-males have strong environmental beliefs is important, but both problems need to be addressed to make progress.

People who participate in multiple outdoor sports are more likely to be able to identify environmental and social concerns regarding the ski industry than those who do not participate in as many activities, which means that they are aware that their behavior may be negative. This gap is significant because it means that there is widespread awareness of the issues within the communities that participate in such activities. Again, the disparity may be because those who can be in the outdoors have been given the chance to care and learn about it. The concept of stewardship is something that a few respondents brought up, claiming that more access to the

outdoors fosters a care for it that will lead to action to protect it. However, awareness itself is not shown to lead to action in this study.

The fact that those who live near a ski resort are more than twice as likely to be able to identify social concerns than those who do not live near ski resorts also suggests that the issues are prominent in areas where skiing is common. If people know about the issues, then they have been educated, at least to some extent, about the consequences of their habits. Again, perhaps it is not education and awareness that are the main problems within the outdoor recreation communities, but the fact that people do not change their behaviors despite their knowledge of issues. This finding also shows that the ski industry has integrated itself into the communities surrounding the ski areas. People who live close are aware of the industry's social impacts because the issues are present in these people's own communities.

The high values of social concern and awareness of such issues, in addition to the contradictions of values expressed by many participants, suggests that the ski area may be in danger of losing business in the long run. The study is consistent with previous literature in its finding that skiers have environmental concerns but are generally not willing to stop skiing because they enjoy the sport, skiing is a big part of their lifestyle and sense of self, or they want to be able to spend time with friends and family who ski. It also shows that people feel tension between their values and actions, which suggests that something might have to change. People often want to resolve tension in their life, whether it be through changing their beliefs or changing their actions to try to find harmony between the two (Oakes 2003). As climate change becomes more of a pressing issue that people are aware of and concerned about, skiers may have to question their contributions. Additionally, if people do not change their ways, there will be no ski industry at all. The self-destructive tendencies of the industry can lead to its demise if changes are not made on both individual and systemic levels. Individual actions do make

differences if enough people commit to making those changes. The ski industry would also benefit in the long run by changing its ways to become more environmentally friendly. The towns depend on the ability of the industry to combat climate change. The communities are completely reliant on the ski industry, and thus in saving the sport, the towns are also spared.

The study is unique in that it looks at a population that is known to be highly educated and environmentally and socially aware. This means that even those who are aware and feel the contradicting values are reluctant to give up a sport they enjoy. Participants frequently referenced the discomfort they felt from acting in contradiction with their beliefs and values. Again, this suggests that there need to be factors outside of mere awareness in order to resolve the problems caused by participation in the ski industry.

There are many things the ski area can do to change, including only using natural snow, discontinuing development, investing more resources in general to combatting climate change and other environmental issues, paying workers higher wages, and working to combat environmental racism. However, the responsibility is not the ski industry's alone. As businesses in a capitalist system, ski areas are driven by consumers. The industry will likely only change if they are pressured by their customers to do so.

### *Future Research and Conclusion*

Research should be done in the future to see how people and the ski industry react to their contradicting values as climate change progresses. Perhaps individuals will continue to rationalize their desire to ski, perhaps the ski industry will make changes, or perhaps climate change will take away the ability to ski in many places. Future research may also take a more qualitative approach to investigate why individuals feel the way they do about the ski industry and the environmental impacts. Such research may look into where individuals receive information and bias, and why they act or feel the way they do based on their backgrounds. It

would also be beneficial to investigate what it would take for people to change their actions, looking for the threshold of damage before people give in to their environmental and social values and change their behaviors. A possible research question may be “At what point do environmental values outweigh desire to ski in various individuals?” It would be beneficial to analyze the tipping point of damage and action. Climate change is posing a real and growing threat to the world. We are at an important point in time where action is needed in order to combat the changes that result from climate change. The young generation is informed and concerned about climate change, but their actions do not always match their beliefs. If the ski industry is to continue to exist, there need to be changes on both individual and systemic levels.

## REFERENCES

- Cavin, Drew Alan. 2008. "Understanding the Experiences of African American Outdoor Enthusiasts." PhD dissertation, Department of Philosophy, Texas A&M University
- Chavetz, Janet S. 1988. "The Gender Division of Labor and the Reproduction of Female Disadvantage: Toward an Integrated Theory." *Journal of Family Issues* 9:108-131.
- Childers, Michael W. 2012. *Colorado Powder Keg: Ski Resorts and the Environmental Movement*. Lawrence, KS: University Press of Kansas.
- Clifford, Hal. 2002. *Downhill Slide: Why the Corporate Ski Industry is Bad for Skiing, Ski Towns, and the Environment*. San Francisco, CA: Sierra Club Books.
- Coleman, Annie Gilbert. 1996. "The Unbearable Whiteness of Skiing." *Pacific Historical Review* 65(4):583-614.
- Colorado College. 2019. "Student Body & Enrollment." Colorado Springs, CO: Colorado College Retrieved Jan. 23, 2019. (<https://www.coloradocollege.edu/offices/ipe/enrollment.html>).
- Getzels, J. W. and E.G. Guba. 1954. "Role, Role Conflict, and Effectiveness: an Empirical Study." *American Sociological Review* 19(2):164-175.
- Goffman, Erving. 1959. *The Presentation of Self in Everyday Life*. Garden City, NY: Doubleday Anchor Books.
- Holden, Andrew. 2000. "Winter Tourism and the Environment in Conflict: The Case of Cairngorm, Scotland." *International Journal of Tourism Research* 2:247-260.
- McIntyre, Lisa J. 2008. *The Practical Skeptic: Core Concepts in Sociology*. New York, NY: McGraw-Hill Companies, Inc.
- Mercer, Lisa. 2018. "How do Ski Resorts Affect the Environment?" USA Today. Retrieved Jan. 31, 2019. (<https://traveltips.usatoday.com/ski-resorts-affect-environment-106575.html>).

- National Ski Areas Association. 2016. *Economic Analysis of United States Ski Areas*. Lakewood, CO: National Ski Areas Association.
- Norgaard, Kari M. 2003. "Denial, Privilege and Global Environmental Justice: The Case of Global Climate Change." *Conference Papers—American Sociological Association* 1-24. Atlanta, GA.
- Oakes, Guy. 2003. "Max Weber on Value Rationality and Value Spheres: Critical Remarks." *Sage Publications London, Thousand Oaks and New Delhi* 3(1):27-45.
- Park, Lisa Sun-Hee, and David Naguib Pellow. 2011. *The Slums of Aspen: Immigrants vs. the Environment in America's Eden*. New York and London: New York University Press.
- Riess, Steven. 1997. *Major Problems in American Sport History: Documents and Essays*. Boston: Houghton Mifflin.
- Rizzo, John R., Robert J. House, and Sidney I. Lirtzman. 1970. "Role Conflict and Ambiguity in Complex Organizations." *Administrative Science Quarterly* 15(2):150-163.
- Sandford, Robert W. 2008. *The Weekender Effect: Hyperdevelopment in Mountain Towns*. Custer, WA: Rocky Mountain Books.
- Stoddart, Mark C.J. 2011. "If We Wanted to be Environmentally Sustainable, We'd Take the Bus': Skiing, Mobility, and the Irony of Climate Change." *Human Ecology Review* 18(1):19-29.
- The New York Times. 2017. "Economic Diversity and Student Outcomes at Colorado College." New York, NY: New York Times Retrieved on Jan. 23, 2019. (<https://www.nytimes.com/interactive/projects/college-mobility/colorado-college>).
- Weber, Max, H.H. Gerth and C. Wright Mills, eds. 1946. *From Max Weber: Essays in Sociology*. New York, NY: Oxford Press.
- Wheeler, Kit. and John Nauright. 2006. "A Global Perspective on the Environmental Impact of

Golf.” *Sport in Society*. 9(3):427-443.

Wilson, Thomas C. 2002. “The Paradox of Social Class and Sports Involvement: The Roles of Cultural and Economic Capital.” *International Review for the Sociology of Sport* 37(1):5-16.

## APPENDIX

## Survey Questions

- What attracted you to Colorado College? Please rank (1 being most important).
  - Location
  - Block Plan
  - Sports
  - Financial aid
  - Social network
  - Campus culture
  - College's reputation
  - Other \_\_\_\_\_
- Race/ Ethnicity (check all that apply):
  - white
  - black
  - Native American/ American Indian
  - Asian/ Asian American
  - Hispanix/ Latinx
- Year in School:
  - First year
  - Sophomore
  - Junior
  - Senior
- How much of your tuition/ fees are covered by need-based financial aid?
  - All
  - More than half, but not all
  - About half
  - Less than half
  - None
- Gender:
  - Male
  - Female
  - Genderqueer/ non-binary
  - Something else \_\_\_\_\_
- What category is your major? Please include your major title.
  - Humanities \_\_\_\_\_
  - Social Science \_\_\_\_\_
  - Natural Science \_\_\_\_\_
  - Fine and Performing Arts \_\_\_\_\_
- Where did you spend most of your time growing up?
  - Africa
  - Alaska/ Hawaii
  - Asia
  - Caribbean
  - Canada
  - Central America
  - Colorado
  - Europe

- Mexico
- Midwestern U.S.
- Northeastern U.S.
- Oceania
- South America
- Southern U.S.
- Western U.S. (not Colorado)
- In which of the following sports have you ever participated? Check all that apply.
  - Biking (road or mountain)
  - Downhill skiing/snowboarding
  - Fishing/ hunting
  - Golf
  - Hiking/ climbing
  - Rafting/ kayaking
  - None of the above
- Did you grow up near (within a couple hours of) a ski resort?
  - Yes
  - No
- Did you grow up IN a town with a ski resort?
  - Yes
  - No
- Do or did you or your family ever have a second home, timeshare, or access to a home near a ski resort?
  - Yes
  - No
- How often do you ski/ snowboard?
  - Once or twice in my life
  - Once or twice a year
  - Several times a year
  - Several times a month
- What is your favorite ski resort?
- Why do you like to ski? Drag to rank your top 3 reasons.
  - Being outdoors
  - Exercising
  - Risk-taking
  - Socializing
  - Other\_\_\_\_\_
- Do you have a ski pass this year?
  - Yes
  - No
- Which pass(es) do you have?
- Why did you choose the pass(es) you did? Please rank in order (1 being the most important).
  - Cost
  - Proximity of ski areas to home
  - Proximity of ski areas to CC
  - What my family/ friends have
  - Minimize environmental impact

- Please score the following statements based on your personal opinions. (Strongly Disagree, Disagree, Neither agree nor disagree, Agree, Strongly Agree)
  - I am always concerned about environmental issues.
  - Ski resorts are wild environments
  - I feel I know a lot about the ecosystem of my favorite ski area
  - Skiing development has spoiled the natural environment at my favorite ski area
  - Skiing does not harm the environment
  - If I thought skiing could harm the environment I would stop skiing
  - Ski development should be allowed even if it spoils the natural environment
  - I feel I know a lot about the social implications of skiing in my favorite ski town
  - Economic growth is as important as environmental preservation
  - I would not visit my favorite ski town if I could not ski there
- What is your biggest environmental concern in regard to skiing?
- What is your biggest concern regarding the social impacts ski resorts have on mountain communities?
- What factors determine why you don't ski? Please drag to rank the top 3 reasons.
  - Cost
  - Friends/family don't ski
  - Lack of transportation
  - Don't like it/ not good at it
  - Environmental concerns

According to Environmental and Social Scientists, there are several concerns raised by skiing. A few impacts include:

- contributions to global climate change through cars and planes for travel, ski industry infrastructures such as chairlifts, snowmobiles, snowcats, and electricity for lodges.
  - Snowmaking requires a huge amount of water and energy, disrupting local watersheds
  - Trampling of vegetation
  - Development around the ski area, cutting down wildlife habitat and raising the cost of living
  - Reliance on (often minority) workers to run the industry, but who cannot afford to live in towns on their low wages
- After reading the paragraph about the environmental impacts of skiing, please drag to rank your top three concerns out of the following options (1 being the most concerning).
    - Contribution to climate change
    - Disturbance of watershed
    - Trampling of vegetation
    - Wildlife disturbance/ diminished habitat
    - Social inequality

How do you balance these concerns with your desire to ski? (1-4 sentences)