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Young People's Perceptions of Nature and Interactions with National Parks

Addy Falgoust
University of Southern Mississippi

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The University of Southern Mississippi

Young People's Perceptions of Nature and Interactions with National Parks

by

Addy Falgoust

A Thesis
Submitted to the Honors College of
The University of Southern Mississippi
in Partial Fulfillment
of the Requirements for the Degree of
Bachelor of Science
in the Department of Geography and Geology

December 2017

Approved by

Mark Miller, Ph.D., Thesis Advisor
Professor of Geography

David Cochran, Jr., Ph.D., Chair
Department of Geography and Geology

Ellen Weinauer, Ph.D., Dean
Honors College

Abstract

This thesis examines young people's perceptions of nature and the outdoors, in order to better understand their interactions and experiences with national parks. Younger generations currently are not engaging with the national parks as much as older generations. This study seeks to understand the reasons behind this change and explore potential solutions to this challenge, as younger generations will be responsible for the conservation and preservation of national parks in the near future. This research was modeled on a previous study based on students at the University of Northern Colorado. Research methodologies included both a survey and focus groups to explore this topic fully. The results indicate that young people desire to spend more time outdoors and visiting National Parks, but cite time, money, transportation, and technology as constraints that prevent them from interacting with nature. Time stands out as the biggest constraint. The focus groups revealed that young people who have a passion will find a way to make time for nature in their busy schedules, as this is a priority for them. As such, encouraging a passion for nature within younger people may help increase their presence in national parks through repeated exposure and positive experiences with the outdoors from a young age.

Key Words: Millennial generation, time spent outdoors, perceptions of nature, National Parks, National Park Service

Dedication

Dear Mom,

Thanks for allowing me to follow my dreams and move thousands of miles away from home. You have helped me to see more of the world than I ever imagined, and I cannot thank you enough. Your constant love, encouragement, and support mean more to me than you will ever know, and I will always come home to visit you.

Love, Addy

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Chapter 1: Introduction

The aim of this thesis is to determine young people's perceptions of nature and the outdoors and how these perceptions shape their interactions and experiences with the United States National Park Service. Do young people in America care about nature and want to spend time in U.S. National Parks?

Since the millennial generation will become the next generation of leaders and lawmakers, it is important to the National Parks System that this portion of the population develops a meaningful and lasting relationship with the parks to help ensure the National Park System's future protection. The National Parks System will need support and protection in the coming years as the nation is faced with large issues, such as climate change, urbanization, changing demographics, and a disconnection between children and the outdoors due to technology (Kempthorne 2007). Currently, most visitors to National Parks are individuals from Generation X (i.e., people born between 1965-1982) and the baby boomer generation (i.e., people born between 1946-1964) Wilson 2015). In order for the National Park Service to increase the number of young people visiting the parks, NPS officials must first understand young people's perceptions of nature. Understanding this will help the National Park Service to design and implement programs tailored specifically to engage young people in National Parks. Additionally, exposing this group of young people to National Parks can have a positive impact on their physical and mental health, as parks are places that encourage active lifestyles (Thomsen et al. 2013).

A survey of and interviews with college students from the University of Southern Mississippi were used to study this research question. The survey asked questions regarding time spent outdoors, attractions and constraints to spending time in nature, and National Parks specifically. Focus group interviews served to provide qualitative data to clarify the findings obtained from the survey. These methodologies are based on a 2012 study by Karen S. Barton – Colorado’s Millennial Generation: Youth Perceptions and Experiences of Nature – in which a survey and focus groups were used to assess University of Northern Colorado’s students’ views of the outdoors (Barton 2012). In that article, Barton notes that its results may have shown a positive bias towards nature due to the location of the original study: the immediate vicinity of the Rocky Mountains. The Rocky Mountains are one of the most beautiful natural landscapes in the United States and contain many National Park Service units (Barton 2012). In contrast, The University of Southern Mississippi is located in a region of the United States that contains very few National Parks. This region also has lower household incomes and higher obesity rates than Colorado: factors that may limit interactions with nature and National Parks, as these activities often involve more active lifestyles and an income surplus for travel. By repeating the study here, at the University of Southern Mississippi, this bias should be eliminated and the combination of results from the two studies should be more representative of the overall U.S. population.

The next chapter of this thesis will review the literature to provide more background information on this topic on existing studies. Following the literature review, Chapter Three will provide a detailed outline of my research procedures, including the

use of a survey and focus groups, mentioned above. Chapter Four will then present, analyze, and discuss the results—including graphs and tabulations of the quantitative survey data, supplemented by analysis of and quotations from the qualitative focus group interviews. Chapter Five addresses possible solutions to the issue, based on the research findings and suggestions from students who participated in the focus groups. Chapter Six concludes the thesis with reflections on my own learning experience from this research and indications for further research on this challenging topic.

Chapter 2: Literature Review

When the National Park Service (NPS) celebrated its 100th anniversary in 2016 it received much attention from the popular media. One of the most common storylines published revolved around the millennial generation and its absence from national parks (NP). The cover story of the October 2016 issue of *National Geographic*, “Back to Nature: The Selfie Generation Gets Outside,” describes the challenges the NPS is facing as the upcoming generation has become more and more disconnected from the outdoors (Egan and Egan 2016). CNN, NBC News, and *The Economist* all ran similar stories (Bergeron and Redlitz 2015; *The Economist* 2013; Gutierrez 2012).

History of the National Parks

Although the NPS was not established until 1916, its roots can be traced back to the late 1800s, a time when naturalists began advocating for the federal protection of lands. Many people know Theodore Roosevelt as the president who established Yellowstone, the nation’s first National Park. However, John Muir, a Scottish naturalist who spent most of his years in Yosemite Valley, is often considered the “Father of the National Parks” (Anderson and Anderson 2016; Worster 2008). Muir began to advocate for a system of wilderness protection after witnessing the exploitation of natural resources in the American West. During this time, entire forests were logged, animal species were hunted to near extinction, mountains were destroyed for precious minerals, and Native American homelands were raided of artifacts (Anderson and Anderson 2016).

The work of naturalists like Muir altered people's perceptions of nature, resulting in a growing conservation movement as natural resources became a major concern for the nation (Anderson and Anderson 2016; Foresta 1984). This time period, between 1891 and 1920, became known as the "conservation era" (Foresta 1984). Foresta suggests that the United States also had four distinctive national characteristics that resulted in the creation of national parks: "[a] unique experience with nature in North America, democratic ideals, the vastness of [America's] public domain, and the affluence of [American] society" (Foresta 1984).

In 1906, the Antiquities Act was signed by Theodore Roosevelt as the conservation movement gained the attention of politicians in the capital (Anderson and Anderson 2016). Although seven National Parks had previously been established (Yellowstone 1872, Sequoia 1890, Yosemite 1890, Mount Rainier 1899, Crater Lake 1902, Wind Cave 1903, and Mesa Verde 1906) by congressional statute, this new law now allowed the U.S. President to designate lands as national monuments (Anderson and Anderson 2016; Foresta 1984).

To clarify, there are a few differences between National Parks and national monuments. "A National Park is composed of several resources and scenery (wildlife, forests, canyons, geysers, waterfalls) that are all federally protected from any private commercial use" and has to be created with Congressional approval (Anderson and Anderson 2016). National monuments on the other hand are usually composed of a single "primary resource of cultural, scientific, or historic interest worth preserving" and can be created by the President without Congressional approval (Anderson and Anderson 2016).

The passage of the 1906 Antiquities Act allowed Theodore Roosevelt to create 18 national monuments during his presidency, many of which were later upgraded to the status of National Park (Anderson and Anderson 2016).

During the beginning of the 20th century, all of the National Parks and national monuments that had been created were being run independently under multiple entities, including the Army, Forestry Service, General Land Office, Bureau of Indian Affairs, and Public Lands Office. Under the leadership of its director Gifford Pinchot, the Forest Service began to show interest in having jurisdiction over all of the public lands to use them for extraction purposes. This outraged preservationists, including the Sierra Club, which campaigned for a parks bureau within the Department of the Interior (Foresta 1984). Finally, on August 25, 1916, President Woodrow Wilson signed the “Organic Act” for the creation of the National Park Service within the Department of the Interior (*National Park Service U.S. Department of the Interior* 2016). As stated in the “Organic Act,” the NPS’s purpose “... is to conserve the scenery and the natural and historic objects and the wildlife therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations” (*National Park Service U.S. Department of the Interior* 2016). All units under the jurisdiction of the NPS are collectively referred to as national parks; some national parks are distinguished as National Parks (capitalized), the highest level of land classification with the NPS.

During its formative years, the National Park Service was managed under the co-leadership of Steven T. Mather and Horace Albright (Anderson and Anderson 2016;

Foresta 1984). The duo combined their skills in public relations and law to grow the NPS into a unit that would continue to exist for over a century (Anderson and Anderson 2016; Foresta 1984). Although the NPS faced a variety of challenges during World War I, the Great Depression, and World War II, these circumstances actually strengthened and improved the parks. In Franklin D. Roosevelt's New Deal program, three million jobs were created in the Civilian Conservation Corps to work on projects that improved the infrastructure of national parks. The celebratory atmosphere of America following WWII inspired citizens to flock to national parks by the millions, with over 62 million visitors in 1955 alone. To deal with the increased visitor numbers, the NPS began a project known as Mission 66. Its goal was to develop infrastructure better suited to handle crowds by the NPS's 50th Anniversary (Anderson and Anderson 2016).

Park Visitation Trends

According to Pergam and Zaradic's 2006 study, national park attendance rates per capita (i.e, as a percentage of the growing U.S. population) increased until 1987. After 1987, the trend reversed and per capita visitation rates began decreasing. The researchers hypothesized that Americans' increasingly sedentary lifestyle, due to the rise of electronic entertainment media, caused this: Americans had traded national park visits for time spent on electronic media (Pergam and Zaradic 2006). Using correlation analyses, the number of per capita national park visits were compared to hours per person per year (hr/p/yr) spent watching television, home movies, and movies in the theaters, hr/p/yr spent playing video games, hr/p/yr spent on the internet, domestic crude oil prices,

federal budget actual outlays to the NPS, number of hikers completing 3500 km. of the Appalachian Trail per capita, money spent on foreign travel per capita, median family income, and mean number of vacation days per employee per year (Pergram and Zaradic 2006). Supporting the hypothesis, the results of Spearman correlation analyses found an exceptionally high negative correlation between all of the electronic entertainment media studied and national park visits. There were no other significant correlations between national park visits and any other category. These results indicate a cultural change, in which more free time is spent inside on electronic entertainment media than outdoors in national parks: 327 more hours per year per capita in 2003 than 1987 to be exact (Pergram and Zaradic 2006).

Since the time of Pergam and Zaradic 2006 study, per capita national park visitation rates have been steadily increasing, with 2015 being a record setting year for the NPS with a total of more than 307 million visitors in one year. Today, the NPS manages 417 units, 59 of which are National Parks. There are now a total of 19 different designations of NPS units, including National Parks, national monuments, historical parks or sites, battlefields or military parks, preserves, recreation areas, and seashores (*National Park Service U.S. Department of the Interior* 2016). In celebration of the NPS Centennial, the Service has been working to “prepare parks for the next century, when new trends will reshape our society and make unprecedented demands of preservation, education, and recreation” (Kempthorne 2007). Unlike Mission 66, the goals of the NPS Centennial Initiative are not to improve infrastructure, but to improve national park

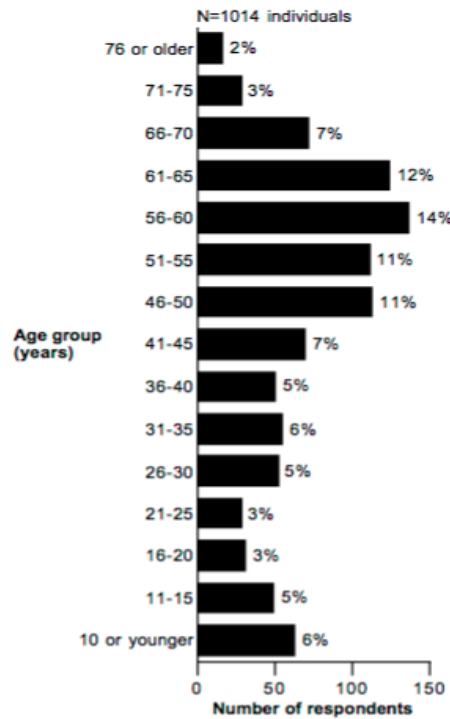
outreach related to the themes of stewardship, environmental leadership, recreational experiences, education, and professional excellence (Kempthorne 2007).

Many health benefits have been attributed to spending time outdoors and visiting national parks, as demonstrated by several studies. The Healthy Parks Healthy People movement was developed in the United States to spread the idea that parks are places for the development of healthy lifestyles, as opposed to traditionally urban settings such as gyms (Thomsen et al. 2013). Visitation to parks is shown to improve both physical and mental health, as it is a more active way to spend leisure time than on electronic media, which has been attributed to sedentary lifestyles that result in obesity (Thomsen et al. 2013; Pergams and Zaradic 2006). Many studies have shown that experiences with parks and nature can reduce the risk of cardiovascular disease, diabetes, obesity, high blood pressure, depression, anxiety, and stress while increasing immunity, cardiovascular function, cognitive functioning, mood, self-esteem, and attention levels (Thomsen et al. 2013; Lee 2011; Thompson et al. 2011; Barton and Pretty 2010; Lee and Maheswaran 2010; Pretty et al. 2005; Maller et al. 2002; Fletcher et al. 1996; Taylor et al. 1985). For these reasons it is beneficial, especially for younger generations in the U.S. that have increased levels of unhealthy lifestyles, to interact with the nation's park lands.

Although the largest number of national park visitors ever recorded occurred in 2015, there is currently what some call a "diversity problem" within demographics of park visitors in terms of both age and race: the majority of park visitors are older and white (Egan and Egan 2016). Wilson (2015) examines the responses of 250 Visitor Services Project (VSP) surveys from 140 NPS units between 1988 and 2011. Using these

data, the mean age for all visitors was calculated to be 39.5 years old, 47.3 years old when only considering adult visitors (18 and older). The median age increased over the time period of study from 39.8 in 1988 to 45.0 in 2011. This means that the largest portion of park visitors are from generation X, followed by the baby boomer generation. It is highly probable that these visitors are not new to national parks, either. Rather, they have been coming to the parks since they were children and are aging with the parks (Wilson 2015). Looking at individual park statistics helps to give a better understanding of how little young adults are represented in national parks today. For example, in Yellowstone, only 16 percent of visitors were between the ages of 11-30 in 2012, while 48 percent of park visitors were between the ages of 46-65 in 2012 (Figure 1) (University of Idaho 2012). Additionally, NPS Park Rangers with whom I have spoken supported this finding, stating that it is not just a statistic that is coming up in visitor surveys, but something they have observed first hand while working in the parks.

Figure 1 Yellowstone National Park Visitor Age



(University of Idaho 2012)

Young People in the Parks

This shortage of young national park visitors, especially the millennial generation, is a troubling statistic, as this may contribute to the decline of the NPS—which people like John Muir, Theodore Roosevelt, Steven Mather, Horace Albright and others assiduously championed. Many people view the national parks as unchanging landscapes that will remain protected forever; however, this is not necessarily the case (Bunting and Shive 2015). The national parks are currently facing countless challenges, including an \$11.5 billion budget deficit, a changing climate, a large population of older employees eligible for retirement, population increases and urban development surrounding parks

and encroaching on park boundaries, and a society that is becoming increasingly busy and distanced from nature (Bunting and Shive 2015; Kempthorne 2007). Citizens from the millennial generation will be the ones to address these problems and more as they become the next leaders of our nation. The quote by David Attenborough, “No one will protect what they don’t care about; and no one will care about what they’ve never experienced” summarizes this issue (Bunting and Shive 2015). A visit to a National Park can have a strong emotional impact on an individual, especially a child, as research shows that adults who care about nature tend to have been exposed to it during childhood (Bunting and Shive 2015; Pergams and Zaradic 2006). That is why it is crucial for the NPS to find ways to bring more young people into the parks. To design plans and programs to achieve this goal, the NPS must understand how young people think about nature. How the parks are treated “articulates our relationship with nature,” just as how we perceive nature influences the way we treat the parks (Bunting and Shive 2015).

The most relevant study and the inspiration for my research on young people’s opinions of the outdoors is “Colorado’s Millennial Generation: Youth Perceptions and Experiences of Nature,” by Karen S. Barton. Her research article acknowledges the correlation between the increase in technology use and decrease in time spent outdoors as described above and likens this shift of “outdoor to indoor migration” to the rural to urban migration of the twentieth century (Barton 2012). Barton’s study used a survey and focus groups of university students in Colorado to determine the cause behind this shift, targeting perceptions of nature, factors limiting outdoor participation, and programs geared towards volunteering and learning in the outdoors. The results from the survey

showed that most students would like to spend more time outdoors, with 70 percent of students reporting this desire. Most students—82 percent of the students surveyed—would especially like to spend this time at National Parks. One strong perception of nature that was prevalent among students surveyed is the idea that nature is a distant place that is far out of reach. When discussing nature in the focus groups, students brought up exotic places located on the other side of the world that they had never been to more frequently than sharing local experiences with nature in their hometown or backyards. This suggests that young people do not see nature as something that is close to home, but rather something that is located in isolated parts of the globe.

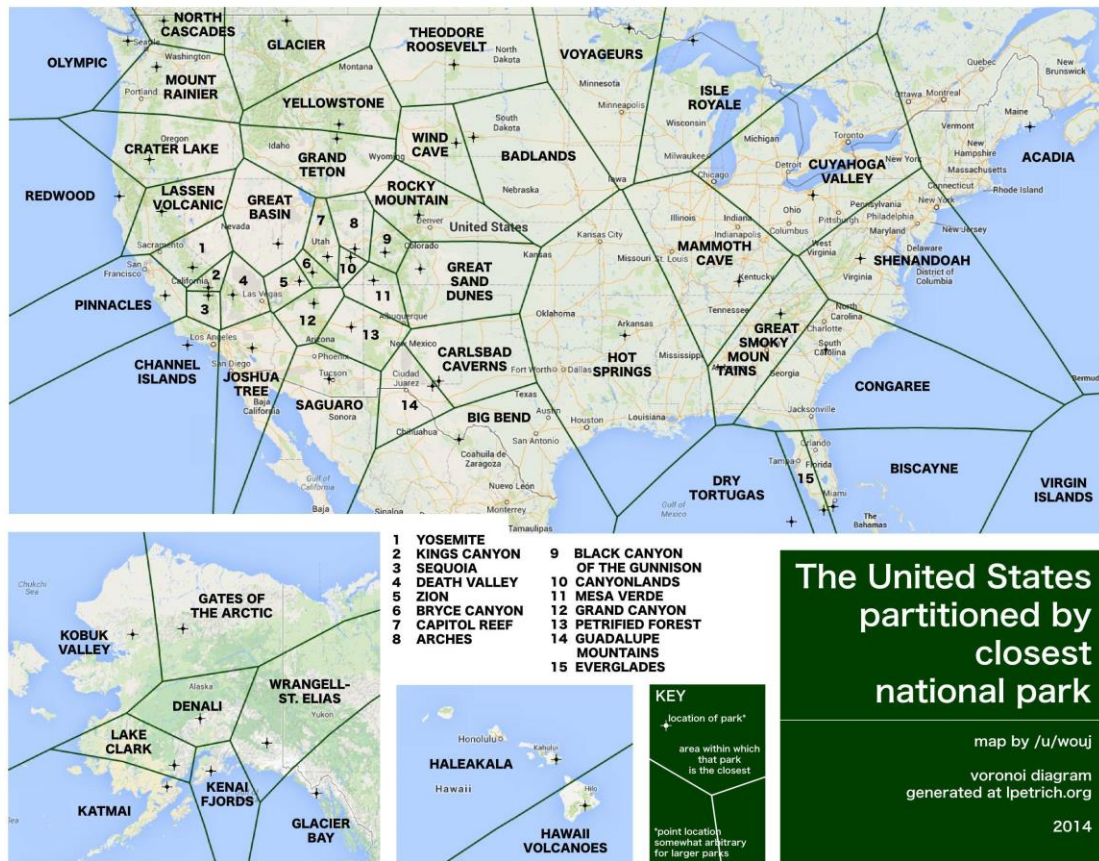
Additionally, Barton's focus groups revealed that although students did not see technology-mediated nature (photos and videos of nature) as a replacement for real world experiences with nature, they did view technology-mediated nature as a gateway to developing an interest in the outdoors. Overall, the constraints keeping students away from the outdoors reported were money, transportation, technology, and time. Lack of time, due to busy millennial schedules, appeared to be the greatest factor inhibiting students from spending more time outdoors. The millennial generation has grown up in a world that is highly structured and scheduled, leaving little time for leisure. Because of this, students confessed that they would be more likely to engage in nature if it was in a structured, productive setting: i.e., something that they could add to their résumés such as volunteer service or course credit (Barton 2012).

One weakness of the study, which Barton acknowledges, is that it was conducted in northern Colorado: an area of the country surrounded by public lands and outstanding

natural beauty. Colorado has thirteen NPS units, four of which are major National Parks, accounting for 673,589 acres of land (as of 2010) (U.S. Census Bureau Statistical Abstract of the United States 2012). The closest major National Park to the University of Northern Colorado, Rocky Mountain National Park, is roughly a two-hour drive from the university. The location of this study could have resulted in a bias towards nature, as students that were surveyed here may have a stronger relationship with nature than most other U.S. citizens of the same age, especially those who are living in urban settings or areas far away from the National Parks of the West.

To reduce this potential bias towards nature, I repeated a similar study at the University of Southern Mississippi (USM). “Southern Miss” is located in a region of the United States that does not have any National Parks and has a smaller number of NPS units than the western United States (Figure 2). Mississippi has a total of eight NPS units, none of which are designated as National Parks. Additionally, these units account for only 118,733 acres of land (as of 2010) (U.S. Census Bureau Statistical Abstract of the United States 2012). The closest major National Park to USM, Hot Springs National Park, is just over a six-and-a-half-hour drive from the university and is one of the smallest National Parks. In comparison, the University of Northern Colorado has six major National Parks located within a six-and-a-half-hour drive from the school. Therefore, USM provides a study site which should produce unbiased results, as its location has limited access to National Parks.

Figure 2 The United States Partitioned by the Closest National Park



(Original source unknown. Retrieved November 8, 2017:

https://www.reddit.com/r/MapPorn/comments/21yoxe/voronoi_map_of_national_parks_the_usa_divided/)

Chapter 3: Methods

As my career goal is to become a park ranger for the National Park Service, I wanted to incorporate an aspect of this in my honors thesis. While attempting to narrow down my topic, my thesis advisor shared the October 2016 issue of *National Geographic* with me. The cover story of this issue, “Back to Nature: The Selfie Generation Gets Outside,” provided me with a direction for my research. It describes the challenges the National Park Service is facing as the upcoming generation has become more and more disconnected from the outdoors. After reading the article, I began researching the topic more by exploring the previous research literature on this topic in search of related studies to guide my own research. Additionally, I intently studied the US National Park System by reading books, analyzing reports, visiting and observing parks, and speaking to NPS employees. I learned about the National Park System’s history, missions and goals, visitation statistics, and managing body (the National Park Service).

While conducting my literature review, I found a particularly interesting study conducted by Professor Karen Barton regarding millennial perceptions of nature. The methods for my research were heavily based on this study. In her research, Barton conducted a Likert Scale survey of 441 college students from The University of Northern Colorado enrolled in 12 different general education courses during the 2010-2011 academic year. The questions in the survey sought to answer how much time was spent outdoors and what attracts and constrains students from spending time in these locations (Figure 3). Following the survey, 50 individuals agreed to participate in a focus group in

which eight questions were asked pertaining to similar subjects as the survey questions (Barton 2012).

Figure 3 Sample of the Questions and Participant Responses from Barton's Study

Sample of Survey Questions (N = 441) Percentages do not total 100 due to rounding.	Strongly Disagree (%)	Disagree (%)	Ambivalent (%)	Agree (%)	Strongly Agree (%)
1. Being green is important to my generation.	1	7	25	49	18
2. I would like to spend more time outdoors.	2	9	20	35	35
3. DVDs and TV are a good substitute for being there.	16	34	31	16	3
4. I would like to spend more time visiting U.S. national parks.	1	4	12	41	41
5. I would like to spend more time visiting Rocky Mountain National Park.	2	5	14	41	31
6. <i>Nature</i> is a term that is hard to define.	17	33	28	18	5
7. Park webcams provide a good alternative for those who cannot visit.	19	3	28	13	2
8. I'd be interested in getting involved in citizen science projects.	5	18	41	2	7
9. Costs get in the way of my visiting parks and public lands.	8	20	24	35	13
10. I consider myself an environmentally conscious person.	0	7	29	4	20
11. Transportation gets in the way of my visiting parks and public lands.	7	22	17	39	15

(Barton 2012)

The methodology for my research was also comprised of a survey and focus groups. These methods were chosen to provide both a quantitative and qualitative research technique to the research question. Approval for this research was granted by the Institutional Review Board (IRB) at the University of Southern Mississippi on February 2, 2017. During March and April of 2017, I surveyed a total of 211 college students of various majors attending the University of Southern Mississippi. I recruited survey participants from all disciplines to obtain results that are more representative of the entire United States millennial population, rather than a group of individuals from the same field of study with similar attitudes towards nature. The survey was administered in both physical and online versions. To obtain as large and diverse of a sample of survey participants as possible, I visited three introductory general education classes and handed out paper surveys. Additional participants completed the online survey, which was advertised in my university's weekly online newsletter and the Honors College's monthly

online newsletter. I used the program Qualtrics to create and administer the online survey. The survey included some questions borrowed directly from Barton's survey, with her permission, in addition to my own. I also entered the data from the paper surveys into the Qualtrics system to maximize the ease and efficiency of my data analysis.

After conducting the survey portion of my research, I contacted via email the survey participants who indicated that they would be interested in a follow up interview and set up two focus groups. This qualitative method was used to add additional rigor and depth to my research, as it provides insight into survey responses, supplements the results from the survey, and reveals ideas that the survey may not have. While the survey results provide statistical data, the interviews provide information that helps explain the trends observed in the survey results. Focus groups served as an ideal interviewing structure for my research as they create an informal setting which allows people, especially young adults, to feel more comfortable discussing their opinions, attitudes, and behaviors openly with the researcher. Additionally, focus groups tend to cover many more ideas, opinions, issues, and solutions than traditional one-on-one interviews, as having multiple interviewees stimulates discussion. As a result, participants can react to other participants' responses and engage in collective brainstorming (Berg 2001). Four students participated in each focus group, for a total of eight students interviewed. Focus groups were held in a library conference room on campus. Each focus group lasted one hour, during which I introduced six talking points that we discussed for roughly ten minutes each. I constructed and followed a moderator's guide to provide the focus group with structure. This guide was based on methods from Berg's *Qualitative Research Methods*

for the Social Sciences (Berg 2001). In addition to taking detailed notes, I also recorded the focus groups with an electronic device. Following the interviews, all these data were transcribed and coded.

Chapter 4: Results and Discussion

How Young People are Spending their Time

The survey results indicate that students are spending more time on electronic devices and media than they are outdoors, as expected (Figure 4). Ninety-seven percent of students indicated that they spend ten hours or less per week outdoors for leisure purposes, with over half of students (approximately 52 percent) reporting spending less than five hours per week outdoors. Several students during the focus group shared that they do not get to spend much time outdoors during the week due to classes and homework. On the other hand, they try to go outdoors on the weekends, time permitting. Eighty three percent of students stated that they spend ten or more hours per week using electronic media, such as television, video games, computers, cell phones, and other hand held electronic devices. Additionally, 37 percent of students reported that they spend 20 or more hours per week using electronic media. It is difficult to separate out how much of this time spent on electronic media is for school or work purposes and how much is for entertainment purposes. Most—77 percent—students reported that they spend at least half of their time spent on electronic devices for school or work purposes; 38 percent of students reported that their time spent on electronic media is divided equally between school and work purposes and entertainment purposes; 38 percent of students reported that most of their time spent on electronic media is for school or work purposes; and one percent of students reported that all of their time spent on electronic media is for school or work purposes (Figure 5). Only 22 percent of students reported that most of their time

spent on electronic media is for entertainment purposes. This indicates that most of the time that young people are spending on electronic media is not purely for their own enjoyment, but rather for academic and professional reasons. Therefore, young people are not intentionally spending their leisure time on electronic media instead of going outdoors. However, only 13 percent of students agreed with the statement, “Today I spend most of my free time outdoors,” while 60 percent of students agreed with the statement, “Today I spend most of my free time indoors on technology” (Figure 6). This contradicts how the previous survey responses were interpreted, indicating that students are intentionally choosing to spend their free time on electronic media for leisure purposes rather than outdoors. This contradiction demonstrates just how complicated it is to decipher whether or not most of the time spent on electronic media is for school or work purposes versus entertainment purposes.

Fortunately, this contradiction was clarified when discussed in the focus groups. Participants suggested some interesting ideas regarding how technology use may impede time spent outdoors. Students indicated that they often waste time on electronic devices when procrastinating doing their homework, rather than consciously choosing to spend their time on electronic media instead of engaging in the outdoors. This idea will be discussed in depth later in this chapter.

Figure 4

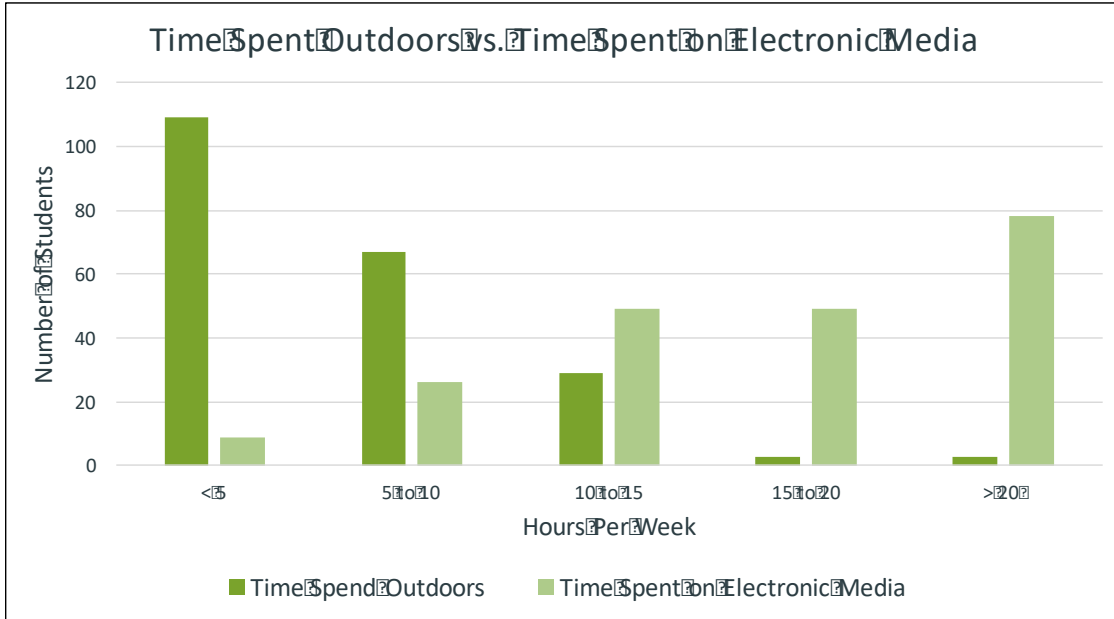


Figure 5

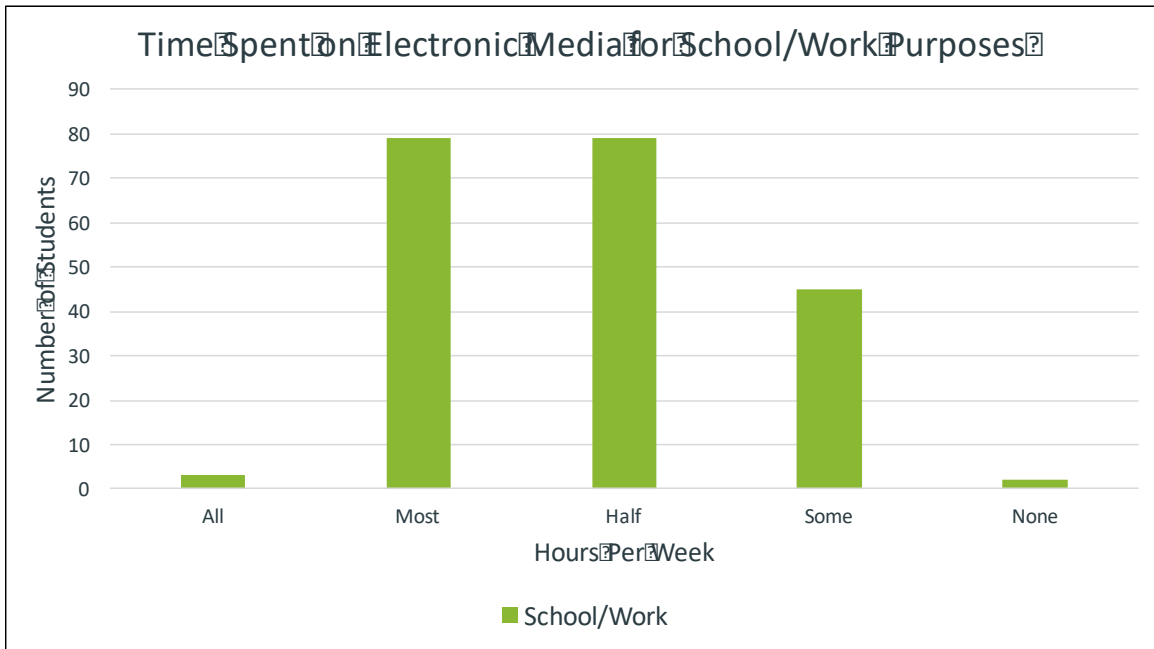


Figure 6 Survey Responses

#	Field	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Total
1	I would like to spend more time outdoors.	48.34% 102	33.65% 71	16.59% 35	0.95% 2	0.47% 1	211
2	I would like to spend more time visiting U. S. National Parks.	52.86% 111	28.57% 60	16.19% 34	1.90% 4	0.48% 1	210
3	Costs get in the way of my visiting parks and public lands.	27.01% 57	35.07% 74	19.91% 42	14.22% 30	3.79% 8	211
4	Transportation gets in the way of my visiting parks and public lands.	22.38% 47	32.86% 69	19.52% 41	19.05% 40	6.19% 13	210
5	Lack of time gets in the way of my visiting parks and public lands.	45.24% 95	32.86% 69	14.29% 30	6.67% 14	0.95% 2	210
6	Lack of time gets in the way of me going outdoors.	29.05% 61	27.14% 57	23.81% 50	18.10% 38	1.90% 4	210
7	As a child I visited National Parks with my family.	17.22% 36	29.19% 61	12.92% 27	25.36% 53	15.31% 32	209
8	As a child I spent most of my free time outdoors.	45.97% 97	31.75% 67	18.01% 38	3.79% 8	0.47% 1	211
9	Today I spend most of my free time outdoors.	2.88% 6	10.10% 21	30.77% 64	40.87% 85	15.38% 32	208
10	Today I spend most of my free time indoors on technology.	16.67% 35	43.33% 91	25.71% 54	12.38% 26	1.90% 4	210
11	I have very little "free time."	31.28% 66	33.65% 71	25.12% 53	9.48% 20	0.47% 1	211
12	School and/ or work prevent me from spending more time in nature.	42.58% 89	38.76% 81	13.40% 28	5.26% 11	0.00% 0	209
13	I live far away from nature.	0.95% 2	6.67% 14	14.76% 31	48.57% 102	29.05% 61	210
14	Watching videos about nature inspires me to spend more time in nature.	15.24% 32	27.62% 58	25.71% 54	21.90% 46	9.52% 20	210
15	Pictures and videos of nature are sometimes better than the real thing.	7.14% 15	9.52% 20	13.33% 28	29.52% 62	40.48% 85	210
16	I think conservation and preservation are important.	53.08% 112	34.60% 73	12.32% 26	0.00% 0	0.00% 0	211
17	I think National Parks are an important part of this country.	62.09% 131	29.86% 63	7.58% 16	0.47% 1	0.00% 0	211
18	I think National Parks are a place to be physically active.	48.82% 103	37.44% 79	12.80% 27	0.95% 2	0.00% 0	211
19	I would like to participate in more outdoor activities such as mountain biking, hiking, rock climbing, kayaking, whitewater rafting, trail running, etc.	54.03% 114	28.91% 61	11.37% 24	4.27% 9	1.42% 3	211
20	Technological devices (cell phones, TVs, computers, video games, etc.) distract me from spending more time outdoors.	18.01% 38	30.81% 65	27.96% 59	18.96% 40	4.27% 9	211

Showing Rows: 1 - 20 Of 20

What Public Lands are Young People Visiting?

Although Mississippi offers a variety of natural and public lands to its citizens, it appears that most students are not taking advantage of these resources. Survey responses

indicate that students recognize that they have access to nature locally, as 78 percent of students disagreed with the statement, “I live far away from nature” (Figure 6).

Additionally, most students have been to local natural areas, with 64 percent of students reporting that they have visited some of Mississippi’s public lands within the last five years. However, it appears that students are not spending time on these lands currently, with 55 percent of students reporting that they have not visited any of Mississippi’s public lands within the past 12 months. One student suggested that this may be due to lack of awareness of natural areas that are accessible to the public near the university, stating, “There are a few places around Hattiesburg like Lake Thoreau and the Longleaf Trace that a lot of students don’t know about.” So, although Mississippi has natural areas to offer its citizens, and most students have been to some of these public lands at least once in their lifetime, young people are not visiting these lands as they reach college age. In part, this may be due to the fact that they are unaware of public lands located near the university. However, other survey results indicate that it is more likely due to constraints which prevent young people from spending more time outdoors in general. These constraints will be addressed in detail later in this chapter.

As Mississippi has no major National Parks located within the state, and with the nearest National Parks to the University of Southern Mississippi (Hot Springs NP and Great Smoky Mountains NP) being seven to eight hours away by car, this has a negative impact on USM students’ likelihood or ability to visit National Parks. (For clarification, although Mississippi has several NPS units throughout the state, including Gulf Island National Seashore, Vicksburg National Military Park, and the Natchez Trace Parkway,

there are no NPS units within the state that fall into the category of National Park.) As a result of this geography, 47 percent of USM students have never visited a National Park. Nearly half of the students who attended the focus groups had never been to a National Park. One student commented on this, explaining:

I've never been to a National Park. I've done a lot of research, but I've never been able to access one. My mom is not into the outdoors, and my dad wasn't either, unless it was like hunting, so I didn't really have an outlet for that until my stepdad came into my life. So, I've never been to a National Park, but I know a lot about them because I want to go so badly.

Of the 53 percent of students who have visited a National Park, 59 percent have visited only one park, 23 percent have visited two parks, and only 18 percent have visited 3 or more parks (Figure 6 and Figure 7). This illustrates that most USM students do not have a strong relationship with the National Parks System as a whole. Additionally, roughly 40 percent of those who have visited one National Park have visited Great Smoky Mountains National Park. This indicates that the distance from a National Park has at least some influence on the likelihood or ability to visit a park. Furthermore, Great Smoky Mountains NP stands out as the most commonly visited National Park by USM students by far, with 68 percent of students who have been to a National Park having visited it. The other most commonly visited National Parks by USM students have significantly smaller percentages of students who have been to National Parks having visited them: #2 Yellowstone NP 21 percent, #3 Rocky Mountain NP 20 percent, #4 Grand Canyon NP 17 percent, and #5 Hot Springs NP 14 percent (Figure 8). This lack of quantity and diversity of National Parks visited by USM students shapes the overall view of the National Parks System by the campus community here, limiting it to be based

primarily on Great Smoky Mountains NP. Knowledge of one park alone is not representative of the entire National Park System, as the 59 National Parks operated under the NPS are so diverse in terms of climate, ecosystem, wildlife, natural features, visitation, remoteness, and countless other characteristics. Additionally, Great Smoky Mountains NP is very different from other National Parks, as it is the most visited National Park in the country, it is the only National Park without an entrance fee, it is more accessible and less remote than most National Parks, and it has a major tourist destination (the Gatlinburg-Pigeon Forge community) located just outside park borders. Therefore, although Great Smoky Mountains NP is a wonderful park, it may not provide visitors with as deep and meaningful experiences of wild natural lands as many other National Parks.

Figure 7

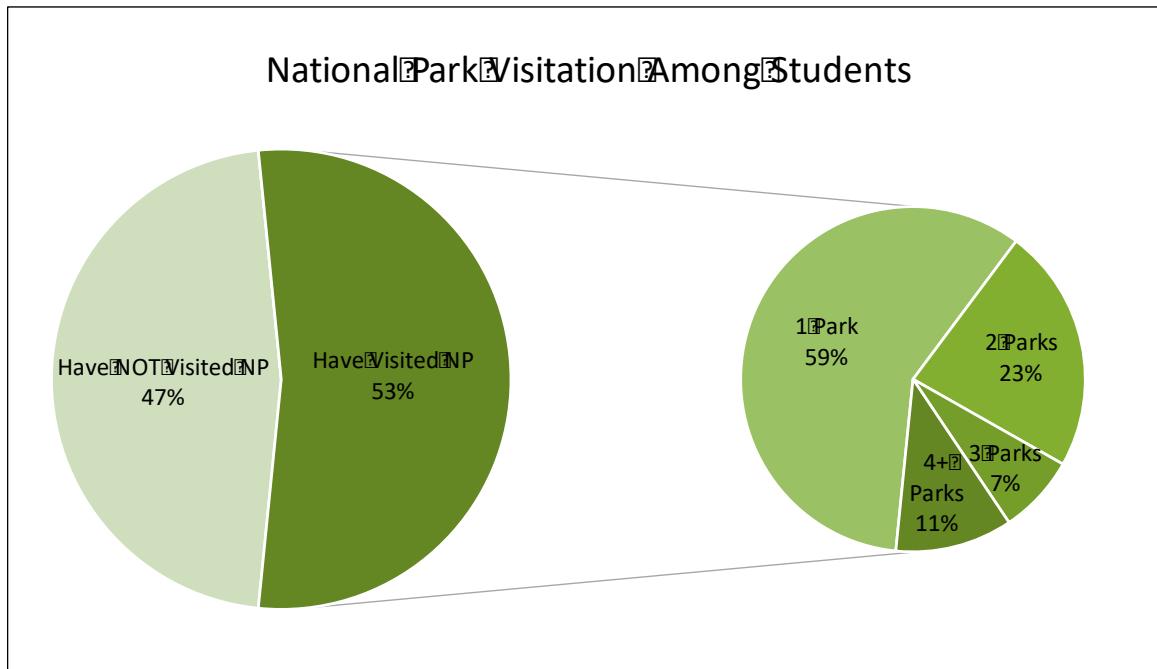


Figure 8 Most Commonly Visited National Parks by USM Students



Young People's Opinions of the Outdoors

Desire and Motivation to Spend Time Outdoors. Although students are spending a significantly larger portion of their time on electronic media rather than outdoors, the survey results revealed that majority of students would like to spend more time outdoors: 82 percent of students agreed with the statement, “I would like to spend more time outdoors;” 81 percent of students agreed with the statement, “I would like to spend more time visiting U.S. National Parks;” and 83 percent of students agreed with the statement, “I would like to participate in more outdoor activities such as mountain biking, hiking, rock climbing, kayaking, whitewater rafting, trail running, etc.” (Figure 6). These survey responses were all supported by the information provided by students in the focus groups. One common theme of the focus groups was the idea that students desire to spend more time outdoors interacting with nature. Students reported spending their outdoor leisure time walking, hiking, biking, kayaking, fishing, camping, taking pictures, swimming,

relaxing in a hammock, and reading. Additionally, students discussed how they would like to try more adventurous outdoor activities including scuba diving, lead climbing and trad climbing (different forms of rock climbing), spelunking, and go on Southern Miss Outdoor Adventure trips. Southern Miss Outdoor Adventures (SMOA) is an organization at the University of Southern Mississippi that offers guided trips and gear rentals for students, faculty, and staff. Some of the activities on the trips offered by SMOA include hiking, backpacking, canoeing, kayaking, stand-up paddle boarding, and rock climbing. During the focus groups, students stated that they would like to participate in more of these trips because they are a way to experience nature with peers and get introduced to new outdoor activities.

The focus groups also addressed what motivates young people to spend time outdoors and what they find enjoyable about being outdoors. Several different responses were given, including to get a break from being in a confined indoor space, to feel natural human survival instincts, to have alone time, or to bond with others through a shared experience in nature. Several students stated that they often go outside to get a break from being confined inside their dorm room or apartment while working on homework. One student explained that she enjoys being immersed in nature because she knows that is what her body was built for:

I like being outside and knowing that before anything else my body is built to survive. It's honestly a really good uplifting time for me. I think that's part of the reason I love going outside on the weekend and doing more trip style things. I may have had a really hard week and done not so great in my classes or had an argument with my friend, but those are all things that we learned to adapt to through society, and I don't have to have society to teach me how to survive. Like yeah there are skills and things that I've learned from my step dad and friends and reading books, but when it comes to it, even if I didn't have those, I would figure

it out, because you have to survive. It always makes me feel better. It's okay if you can't do [something because] you are doing the most basic human thing right now in just surviving. It's really comforting.

This student expressed that she feels free from the judgment of society when she is in nature, because there she is existing in the environment that her body was built for and does not have to worry about the pressures of society. Lastly, some students valued spending time alone in the outdoors, while others enjoyed sharing in these experiences. Although most students had a preference for either spending time outdoors alone or with others, they all had experienced and enjoyed both ways. The more introverted students explained how going outdoors provides them with time to relax and often feels empowering:

I enjoy going out and spending time with other people in the outdoors and kind of sharing in that, but I think some of the times when I have been the absolute happiest are when I took myself somewhere and just got to really embrace my time. If I saw a rock that I thought was super cool I could pick it up, check it out, and not have to worry about other people. I could just randomly decide, oh I'm going to summit this hill, I can go to the ocean. It's so calming to have that connection and feel like I can do anything here. There's no pressures of anything at all, and it's very empowering, I think, to do what you want.

For this student, being alone in nature is liberating because it gives one the freedom to be completely spontaneous and do whatever he/she desires. On the other hand, spending time outdoors with people who can share a passion and excitement for nature can increase one's own enjoyment. One student explained:

I like to have a partner, and that's it...not only for safety issues, in case something goes horribly wrong, but I get so excited about nature and my passion for being outside and just breathing clean air and not being distracted by noises and things that are manufactured, that I just want to share that with another person. And I want to see them get excited! And I want to feed off their energy about it, even if we don't speak for hours on end... Even when you do talk, it's not about ruining the silence necessarily, it's more about sharing in that passion, and I love that!

For this student, sharing an experience with another in nature increases his/her own excitement and enjoyment. Another student analyzed this desire to share one's experience in nature with others and related it to photography, stating:

I think that's one of the reasons people take pictures so much. I don't think it's a conscious motive. You see something so beautiful, and you want to share it with other people, whether you do end up sharing it or not, you want to capture it so other people can see this too. People always take cameras if they go to parks, that's like number one on the list, "Do you have your camera?" And I think that's because people want to share it.

Furthermore, cameras make it possible to experience both: they provide individuals with the ability to spend time alone in nature and share their alone time with others later. Overall, it appears that young people enjoy spending time in nature because it provides them with the opportunity to take a break from the fast-paced world of college and relax either alone or with friends.

Defining Outdoors. One topic that arose during the focus groups, but that was not addressed in the survey, was the definition of "outdoors." Most students agreed that being "outdoors" means being outside and connecting with the natural environment, as this student explained:

I do wish I could spend more time outdoors... but just to be clear [by] "outdoors" I don't mean stuff like sitting on a patio. I make it a point to go spend [about] an hour during the day in the grass somewhere or go to a park and physically be in touch with the physical earth, which for some people doesn't count as outdoors. But just the idea of being in nature, even if it is like groomed and has concrete somewhere nearby, the idea that I get to connect with the earth around me is really important, even if I don't get to go on a trip and do something outdoors, I still want to be outside.

Although most students believe that spending time “outdoors” should involve a meaningful connection with nature, this definition tends to be more flexible during school. The focus groups revealed that the quality of time spent outdoors changes when students are in school versus out of school. The students explained that while at college they have other priorities, so spending time in the grass may satisfy their desire to get outdoors. However, when students are out of school they are able to spend more quality time outdoors, doing activities such as kayaking or camping, as it’s more accessible and manageable during this time. One student elaborated on this idea, stating:

I think you get outside in any way you can. I live a mile away off campus, so I’ll walk here or ride my bike here, and sometimes that’s about as much outdoor time as I get because I have classes until the evening. It’s just the little small ways you can get outside, even if you can’t really connect with outside of the main infrastructure of the city.

For this student, spending anytime outside during school is an achievement in itself. Combining the two ideas discussed here, another student summarized the issue by saying:

I definitely think it all counts, whether it’s groomed or a little more wild. But I definitely prefer to get to the untouched stuff as often as possible.

To students, ideally, spending time “outdoors” would be defined as spending time outside where one experiences a connection with nature. However, while in school, the definition of going “outdoors” shifts and may often simply mean being outside.

Opinions of National Parks. Survey responses specifically about National Parks revealed that although most students are not frequent visitors to National Parks, they regard them positively. Ninety-two percent of students agreed with the statement, “I think

National Parks are an important part of this country” (Figure 6). Only one survey respondent disagreed with this statement, accounting for less than 0.5 percent of the total survey responses (Figure 6). During each of the focus groups, students eloquently put into words how they felt about National Parks when this topic was addressed. One student stated:

I’ve never been to a park, but I think they are really important because I [think] it’s [very] similar to women’s suffrage and desegregation. Environmentalists fought really, really hard to keep some of the purist parts of the U.S. intact that were being destroyed by the rising industrialization. I guess they are like uncorrupted mother earth, and I think they are just really important to stay grounded and not get detached to just how important the earth is to us.

Another stated:

I think National Parks are very important. They teach about conservation, preservation, natural resources, animals, and what not. Smoky Mountains is the only one that I have been to, but I loved it... I don’t know, I’ve just always kind of been obsessed with them, even though I haven’t been able to visit.

Although neither of these students have had the privilege of exploring the National Parks System in depth, both regard National Parks as an important environmental resource that this country has to offer. When the topic of National Parks was addressed, one student, who had been fortunate enough to visit numerous National Parks, expressed great joy. Her eyes lit up and a big smile stretched across her face as she began to speak, saying:

I loved visiting the National Parks that I visited... I think the parks are a fantastic thing... It was amazing, just to put it short. I mean, there’s not enough words to describe how much we experienced.

For her, the thought of National Parks conjures deep, fond memories of visiting the National Parks with her grandmother and sister. Although the other two students

regarded the National Parks very highly, they discussed them in a much more formal, impersonal manner, suggesting a lack of emotional attachment. The NPS needs to establish deep, personal connections with individuals in order for their future protection, as was discussed in literature review (Bunting and Shive 2015). A park ranger whom I spoke with regarding this issue stated:

Obviously, the fear is that if people don't get to spend time in nature and aren't interested in it, then they won't necessarily care to make sure it's protected so that others can even have the opportunity in the future, and so that becomes the danger. If you don't have people who care enough to make sure it's protected, future generations won't even have the opportunity to spend time in nature if they wanted to.

This statement stresses how imperative it is that the NPS is able to develop these emotional connections with young people today. Although young people view the National Parks as an important part of this country, only those who visit them significantly are likely to develop a profound, emotional connection to them.

What's Stopping Young People from Getting Outside?

Students agree that technological devices, transportation, costs, and lack of time get in the way of their visiting parks and public lands, with lack of time being the biggest constraint. Although 49 percent of students agreed with the statement, "technological devices (cell phones, TVs, computers, video games, etc.) distract me from spending more time outdoors," only 23 percent of students disagreed with this statement (Figure 9). Therefore, a large portion of survey respondents, 28 percent, neither agreed nor disagreed with the statement (Figure 6). This issue was discussed further in the focus group, as it was unclear as to whether or not time spent on electronic media negatively impacts time

spent outdoors. Here it was revealed by one student that time spent on technology does have a significant impact on time spent outdoors, whether one wants it to or not. Another student addressed this further stating:

I think more than intentionally [thinking], I'm going to do this, instead of going outside. What I'm doing is, I'm actually wasting time. I'm watching Reign instead of doing my homework. And if I had done my homework when I was supposed to, I could go outside later. I think it's not actually thinking long term like, Oh, I could have more time for this if I had done my homework before the weekend appears. I'm procrastinating not doing homework, which then causes the consequence of me not being able to go outside. So, technology is not necessarily the reason I don't go outside directly, it's just like a really sad indirect consequence.

This statement highlights the idea that students are not directly or intentionally spending time on electronic devices in place of time outdoors. Other survey responses indicate that electronic devices do not have as large of a negative impact on time spent outdoors as one might assume. Instead, transportation, costs, and lack of time were all reported by a greater percentage of students as constraints preventing them from getting outside to parks and public lands: 55 percent of students agreed with the statement "Transportation gets in the way of my visiting parks and public lands;" 62 percent of students agreed with the statement "costs get in the way of my visiting parks and public lands;" and 78 percent of students agreed with the statement "lack of time gets in the way of my visiting parks and public lands" (Figure 6 and Figure 9). During a focus group, one student addressed how these constraints prevented her from visiting a National Park, stating:

For spring break, I wanted to go to Yosemite or Yellowstone, but it's like a 20 something hour drive, and in that one week I didn't have the time or the money. So, I ended up going to Smoky Mountain National Park, which I've been to

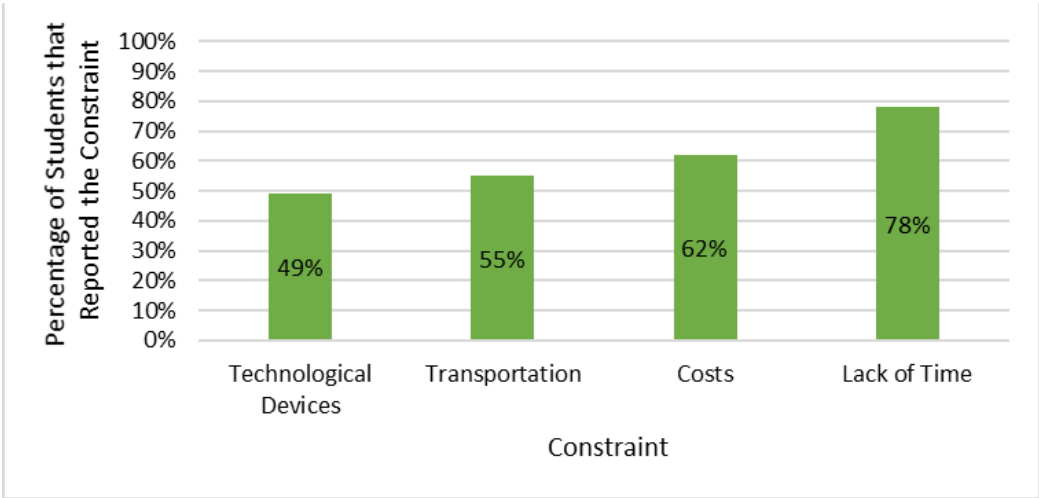
several times. I wanted to kind of branch out, but it was unrealistic on my budget and stuff.

In this case, transportation, money, and time all prevented this student from visiting a different National Park. When discussed with a NPS park ranger, she elaborated on how these constraints on young people impact their ability to visit Yellowstone NP specifically:

Well, at least for Yellowstone, Yellowstone is fairly remote. We are a little bit in the middle of nowhere, and granted we are very big, and people from all over the world come [here], but, it is a very intentional thing. There are no major population centers nearby, so people do have to travel quite a ways to get here. And often in the 18-24 age range they might not have the means to take vacations. So, they are either in college or even if they are in the working field, they might not be in a situation where they are already in a job that has vacation time to be able to kind of take off and take the time it would take to come to a park like Yellowstone. So, some of it may just be logistical in that way: having enough disposable income and paid vacation time at that time in their life. So that is part of it.

This statement highlights how transportation, money, and time negatively impact the ability of young people to travel to National Parks like Yellowstone.

Figure 9 Constraints that Prevent Young People from Visiting Parks and Public Lands



Other survey responses and the focus groups support the idea that lack of time is the biggest restraint for students. As one student put it: “Time is definitely the biggest factor stopping us from spending time outside. It doesn’t cost much money to make a couple of sandwiches and go out.”

In the survey, 65 percent of students agreed with the statement, “I have very little ‘free time,” and 81 percent of students agreed with the statement, “School and/or work prevent me from spending more time in nature” (Figure 6). During the focus groups, students repeatedly acknowledged that their busy school, work, and social schedules prevent them from spending as much time as they would like outdoors. One student elaborated on this, explaining:

That’s something that I think a lot of college students run into a problem with though, because like for me, I don’t do any homework on the weekend, but that’s because I am working. I can’t focus on homework right before I go to work, and after I get home from work, I don’t have enough time, it’s time to go to bed. And so, I dedicate all my weekdays to school, and my weekends to work. So, it’s kind of like you have the two jobs, you have your school job and then like your actual job. And I think that’s one of the harder things for younger people, that they have so much going on that they don’t have this set schedule yet. They are still very fluid in their responsibilities, and how that takes up their time. You’re completely booked, whether you want to be or not.

Balancing school and work can often leave students with little leisure time, negatively impacting the amount of time that they spend outdoors. Another student went on to explain why time outdoors is not a priority in young people’s busy schedules:

When you think about applying to college, or grad school, or your job or whatever, people want to see that you maintained a certain GPA, and you were involved in extracurricular activities, and you were social, and you did community service. I feel like here, there are two or three organizations that sort of lean towards environmental things, like environmental care, but [that don’t] necessarily [push] people to go outdoors and enjoy [it]. Like even the Outdoor Adventure Center is technically not an organization, so even if I wanted to, I can’t

list it on my resume. I can't [say] I devoted my time and energy to furthering...people don't care that I just did this for fun. So, people are like well, I could be in SGA, or I could spend all of my time outside. And then people are like well, SGA sounds better for my future...outdoors...I'll make time for it when I can. I don't know, maybe someone just needs to start a club that literally just like does [outdoors] things. [Spending time outdoors] just doesn't have a lot of weight that I think college students want or need it to hold.

Many students do not prioritize spending time outdoors, as it is not something that can be added to a resume to benefit their future career. For this reason, school, work, volunteering, and extracurricular activities often come first, leaving little time for the outdoors in students' hectic schedules.

Additionally, USM's location limits the ability of students to get fully immersed in nature on a time budget, both on a small and large scale. One student described how just getting outside of the city takes time, stating:

I would definitely love to spend time outdoors... it's just time constraints make it hard to get out. You've got to get away from Hattiesburg if you want to get outdoors or you are just walking around the streets, so just time to travel is hard.

Another student elaborated on this, stating:

I used to live deep in the woods, but since I moved to suburbia I don't really see sitting on a patch of lawn that is mostly turf as "nature." I like to be fully immersed, and I don't really get that anymore because of where I live and the cost and time that it takes to get to those places....

If students only have a 30 minute-to-hour long break during the day, it can be very difficult to get quality time in nature. For example, one of the closest outdoor resources to USM's campus is Lake Thoreau Environmental Center. This property is less than ten miles away from campus. However, it takes approximately 15 minutes to travel to by car. So, if one only has a 30-minute break, by the time the student arrives there, it is already time for him or her to go, leaving the student little to no time to spend in nature.

Additionally, it is even harder to travel to a more remote location with grander natural features, such as a National Park or other public lands. While explaining how the lack of accessibility to these locations limits one's ability to experience them, an Oregon native who is a USM student described the differences between going outdoors in Oregon and Mississippi, stating:

At home, [in Oregon], if you wanted to just go, like after school, you could just drive for an hour, go hiking in the gorge, see these beautiful waterfalls, and be back home for dinner. So that was never a problem.

From his/her experiences, it is more difficult to experience nature in Mississippi than it was in Oregon. This is likely due to the fact that the West has greater access to public lands and National Parks than the Southeast (Figure 2).

Lastly, one idea that was brought to light during a focus group is that a fear of nature can prevent young people from going outdoors. This fear usually results from lack of experience with the outdoors. As one student pointed out, for a lot of young people who are not familiar with the outdoors, being immersed in nature can be scary:

I think one of the biggest factors when it comes to actually getting back in touch with nature is uncertainty. We think, "Oh well we can plan all we want, but something may go wrong. And I'm nervous. Like what if my car breaks down while I'm on my way to a National Park?" And there's like a lot of other things [spiders, snakes, allergies, getting lost...]. Someone told me a few weeks ago that it's best to take to the leap and grow your wings on the way down....

There are a lot of young people that did not grow up in "outdoorsy" families, so to them, the idea of sleeping outside is often farfetched and terrifying. Experiencing nature for the first time can often be overwhelming, as it is filled with unfamiliar sights, sounds, and smells. So rather than stepping outside of their comfort zone and trying a new experience, young people often dismiss the idea of going outdoors altogether.

To summarize, fear, technology, transportation, accessibility, money, and time are all factors which negatively impact young people's ability/desire to spend time outdoors. Survey responses and focus group discussions revealed that lack of time has the largest impact on young people's ability to go outdoors. In today's society, college students' schedules are completely filled with school, work, extracurricular activities, and social events. These obligations often require students to spend a great deal of time on technology, while simultaneously decreasing the amount of free time young people have to get outdoors.

Comparison with the University of Northern Colorado

The results from this thesis research support many of Barton's findings from her foundational research on this topic, indicating that this information may be fairly representative of the entire population of young people in the U.S. (Figure 10). Just as Barton's study found, results from this research also indicate that students would like to spend more time outdoors. In Barton's survey, 70 percent of students agreed with the statement "I would like to spend more time in the outdoors," while 82 percent of students agreed with a similar statement in the survey conducted for this thesis. Additionally, 82 percent of Barton's survey respondents and 81 percent of USM respondents agreed with the statement, "I would like to spend more time visiting US National Parks."

Furthermore, students in both surveys cited transportation, costs, time, and technology as constraints which prevent them from spending more time outdoors.

Barton's survey did not include a question which cited time as a constraint. However, it

was consistently cited as a constraint by students during the Barton's focus groups. For this reason, a question reporting time as a constraint to going outdoors was included in this survey. Most students agreed with this statement. Additionally, time was also thoroughly discussed as a constraint by USM students in the focus groups. Both studies found that students are spending much more time on technology than outdoors. Although this was the overall finding, a significantly smaller percentage of students reported spending 20 hours or more per week on electronic media at USM than at the University of Northern Colorado. The exact reasoning behind this is not clear, however, it is likely that students did not accurately report their number of hours per week spent on electronic media. Since it is difficult to accurately estimate the number of hours per week spent on an activity in retrospect, time may have been overstated or understated.

The only significant difference between the two studies was that University of Northern Colorado students reported spending more time visiting their state's public lands than students from the University of Southern Mississippi: 79 percent of UNC students reported visiting some of Colorado's public lands within the last year, while only 45 percent of USM students reported visiting some of Mississippi's public lands within the past year. Additionally, 94 percent of UNC students had visited some of Colorado's public lands within the past five years, while only 64 percent of USM students had done the same in Mississippi. This dissimilarity can be attributed to differences in the abundance and accessibility to public lands between the two states, as discussed previously.

Despite this difference, USM served as a worthy replication site for this study.

Although the two sites differ vastly in terms of accessibility to public lands and outdoor culture, the major findings of both studies are similar. Therefore, this research supports and strengthens Barton’s findings.

Figure 10

Results Comparison		
Question	Barton’s Results	Results from this Research
I would like to spend more time outdoors.	70 percent agreed	82 percent agreed
I would like to spend more time visiting US National Parks.	82 percent agreed	81 percent agreed
Transportation gets in the way of my visiting parks and public lands.	54 percent agreed	55 percent agreed
Costs get in the way of my visiting parks and public lands.	48 percent agreed	62 percent agreed
Spend > 20 hours per week on electronic devices / media	69 percent agreed	37 percent agreed
Spend > 20 hours per week outdoors	7 percent agreed	1 percent agreed
Have you visited any of Colorado / Mississippi’s public lands in the past year?	79 percent yes	45 percent yes
Have you visited any of Colorado / Mississippi’s public lands in the past five years?	94 percent yes	64 percent yes

Chapter 5: Possible Solutions

During the focus groups, when students were asked what would help young people to spend more time outdoors, their immediate response was more time and more money. Based on the research results, this chapter provides several suggestions for how the NPS can take action on this issue.

The number one reason why young people are not visiting national parks is due to a lack of time. However, time is not a resource that can be easily distributed. Therefore, this creates a difficult challenge for the National Park Service. The absence of this demographic from national parks is not by choice: young people would like to be visiting national parks; however, they lack the resources to do so. Therefore, the National Parks Service will have to outcompete school, work, and technology for young people's time and attention.

Social Media

In order to compete for time in young people's busy schedules, the NPS must first make themselves known among this demographic. When discussed in the focus groups, students repeatedly proposed that increased awareness of natural resources and public lands through publicity and advertising would make young people more likely to go outdoors and interact with nature. However, nature is an abstract entity that does not have an organization or company to advertise on behalf of it. Fortunately, some natural areas,

such as national parks, are run by a governing body that has the ability and power to reach out to the public and increase awareness. Students believe that better advertising and more publicity by the NPS specifically would help to spark an interest in national parks among young people and increase national park visitation from this demographic. However, the NPS lacks the budget to spend their financial resources on advertising. This is where technology and social media can actually play a positive role in getting young people active in the outdoors and visiting national parks. Many young people today share their experiences in nature and visits to national parks on social media sites. This often inspires outdoor activity in their friends and followers, especially when captivating images or videos are shared. One student explained how her presence on social media has influenced his/her followers to visit national parks, stating:

Primarily when we went to the national parks I would usually bring my camera or just use my phone, and I would post pictures trying to get more people to go outside. A couple of people have said that my picture had inspired them to visit that place. They said it helped inspire them to make that plan to go out.

This student's motivation to share his/her experiences in National Parks on social media was to inspire outdoor activity in others. Therefore, some young people may be sharing their experiences with the outdoors as very intentional "nature" advertisements. A couple of other students elaborated on how they themselves have been inspired to go outdoors from social media, explaining that when they see pictures of natural places that they would like to visit on sites such as Instagram and the Outbound Collective they often find its location and visit it. One student provided a specific example of this, stating:

For me, yes, social media contributes. I would not have known about Red Bluff had I not like my freshman year seen a picture where someone else had been.

[Red Bluff is] just a small, like, sort of, can you even call it a canyon, near here. And like I love Red Bluff, but I would have never even known that it existed had I not seen the picture of it on someone's [social media].

This is a firsthand example from a student concerning how social media can serve as an advertising tool for natural places such as national parks. When discussed with a NPS park ranger, she explained the advertising role that social media serves for the national parks, stating:

Yeah, yeah, so I think [social media] helps with some of that exposure. So that's nice, because, you've probably noticed this, national parks don't have commercials on television. So, everybody else is selling their product, but you don't see national parks on television, at least not on behalf of the National Park Service. And so, it's everybody else who is spreading the word from their time in nature through social media. And, on occasion, there are definitely some nature channels that have National Geographic specials and things like that that take place outdoors, but there's not any 30 second spots during the Super Bowl that are reminding people that hiking is nice and that the public lands belong to them or anything like that. So, I think social media does help remind people, like oh yeah, it's beautiful to be outside. That person looks like they are having fun.

The NPS recognizes that social media can get people excited about national parks and being active outdoors. Therefore, the NPS should increase their presence on social media to take full advantage of this. Currently, the U.S. Department of the Interior has a popular account on Instagram, with over 1.5 million followers. This Instagram frequently shares pictures from national parks and other public lands throughout the country. Furthermore, the NPS has campaigns such as #findyourpark to encourage people to share their experiences with the national parks online. Additionally, some National Parks host "Instameets" where people can meet up with NPS photographers and learn how to photograph specific features of the park. Increasing awareness of the outdoors and

National Parks through better advertising and publicity with the help of social media may be the first step in catching young people's attention and drawing them outside.

Getting People Outside

Once young people's interest in the outdoors and national parks is sparked, they must next be motivated to dedicate their time to it. As discussed earlier, stepping out of one's comfort zone often prevents young people from engaging in nature, even if they desire to. However, it is important that young people take the opportunity to experience nature and national parks, because one cannot like something that one has never experienced. One NPS park ranger explained the importance of experiencing nature, stating:

I don't think we've lost youth yet, as far as turning them on to nature, I think they just need time in nature... I think the outdoors still provides everything it always has and that people are drawn to it once they have that experience. I think it simply is a matter of [that] there are so many other things competing, and it's hard to actually unplug...But I think, what I'm seeing, is that young people still are okay with nature. It's not that they would prefer electronics every single time when they have both. I think they simply don't always get opportunities to have the time in nature. It doesn't come up as often in their everyday life.

Therefore, providing individuals with firsthand experiences of nature and national parks is essential in order to get them interested in spending time in the outdoors.

Students in the focus group suggested that minority movements that embrace the outdoors, group organized trips, and outdoor research and volunteer work, can encourage young people to get outdoors and experience nature and national parks. Some minority groups, including African Americans, Asians, Hispanics, women, and the LGBTQ community are underrepresented in the outdoors and national parks. Recently, there has

been an upsurge in groups founded to increase and inspire outdoor activity among these demographics. Examples of these groups include, Outdoor Afro, Greening Youth Foundation, OUT There Adventures, Latino Outdoors, City WILD, Brothers of Climbing, and many more (Walker 2017). These groups can be very powerful, as they make individuals who might normally feel out of place in nature feel like they belong there. This creates a comfortable and safe environment for those experiencing nature for the first time. Along with providing individuals with an introduction to nature, these groups help individuals to build lasting relationships with the outdoors.

Group organized trips can be another way to get young people outside and visiting national parks. Trips such as these often provide individuals with the proper gear needed for the trip and expert knowledge on the activities that will be completed. This is extremely helpful for individuals who are new to the outdoors and unfamiliar with outdoor activities such as, hiking, canoeing, and camping. It also makes it possible for individuals to participate in more adventurous outdoor activities that typically require prior experience, such as backpacking, whitewater rafting, and rock climbing. Many universities have outdoor recreation organizations that offer students group organized outdoor adventure trips. For example, at the University of Southern Mississippi we have Southern Miss Outdoor Adventures (SMOA). Lastly, nature based research and volunteer work can serve as an outlet to get young people outdoors and involved in the national parks. Since this outdoor time is constructive and can be added to young people's resumes, they are more likely to incorporate it into their busy schedules. Therefore, outdoor research and volunteer work provides a great channel for busy young people who

want to engage in the outdoors but lack the time to do so leisurely. In conclusion, students from the focus groups believe that minority movements that embrace the outdoors, group organized trips, and outdoor research and volunteer work can get those who are interested in nature active in the outdoors for the first time.

Instilling a Passion for Nature in Young People

Although the previous solutions discussed can help get young people interested in the outdoors and engaging with nature, a more sustainable solution is to get people interested in the outdoors from a young age. Most of the students who attended the focus groups did so because they are passionate about the outdoors and national parks and wanted to further this research. The majority of these students reported engaging with the outdoors on a regular basis, despite their busy schedules. As I spoke with these students, it was slowly revealed that they grew up interacting with nature. When I asked if technology ever motivates them to get outdoors, one student stated:

As a kid, I used to get National Geographic magazines, and I watched a lot of Animal Planet, like Steve Irwin and Jeff Corwin, like those people that just go outside and look for animals, so I would kind of do the same thing. I guess it kind of already got instilled in me as a kid, so I don't really see anything pushing me to go outside in media [now].

For this student, a passion for the outdoors was developed during childhood from exposure to educational children's shows and magazines that focus on nature.

Furthermore, studies show that adults who are active in the outdoors were also active in the outdoors as children (Bunting and Shive 2015; Pergams and Zaradic 2006).

Therefore, to increase the number of young people visiting national parks into the future,

it is necessary for the NPS to develop deep and meaningful connections with children. This is something the NPS has been working on through their interpretation division. Through speaking with NPS park rangers and visiting national parks, I learned about some of the programs that they offer. In Yellowstone, these include the Junior Ranger Program, interpretive programs, residential education programs, distance learning programs, and the Youth Conservation Corps. Some of these programs also introduce children to careers with the NPS and create pathways that encourage teenagers to consider these careers. During a focus group, one student addressed the importance of this, stressing:

I think there are [too] few people that are going into earth sciences. I think it used to be a much bigger field than it currently is, and most of the people that are going in, at least for geology in the south, are here for petroleum and oil. I don't see the same kind of passion in people about going into studying the earth and the wild I guess. I was looking up stuff about people like John Muir, and he was a naturalist. And I was like, man why is naturalist not a job anymore? It's not a classification you can go in to, because it's not about just geology, it's not biology, ecology, there wasn't any one thing, it wasn't about meteorology, it's about understanding the world as a unit. And I think, somewhere, when kids go from always being outside and running around in their diapers and enjoying the sunshine and going to school, they lose that curiosity for learning about their surroundings, and I think that's kind of a big hit.

As young people grow up in today's education system, they often become focused on obtaining a career that is considered "successful" by society's standards. Often careers in outdoor fields are overlooked, as young people desire careers which they believe will make them successful and wealthy. This can cause young people to lose sight of nature, something that they were once curious about as a child, as they begin to focus more of their time and attention on obtaining their career goal. That is why it is important to teach students that there are career options that allow you to work in the outdoors, engaging in

nature, while still being considered successful. People who go into outdoor careers typically retain their passion for nature during the transitional period of their life from childhood to young adulthood, allowing them to remain in touch with nature throughout their lives.

To summarize, exposing children to the outdoors at a young age can instill a passion for nature within them. Furthermore, teaching children and young adults about careers in outdoor related fields can help them to cultivate this passion as they enter the college and the working world. Therefore, in order to sustain a population of young people who care about the outdoors, society must impart a passion for nature within children from a young age and foster it throughout their academic careers.

In conclusion, a passion for nature must be instilled in people at a young age in order to increase the presence of young people in the outdoors and national parks. As one student from the focus groups stated:

You have to make time for the things that you love. Just like people do that in relationships, they make time for people they love. You have to make time for the things you love too.

Young people, such as this student, who are truly passionate about nature make the time to be outdoors, despite how busy their schedules may be, because it is something that they love. Therefore, if the NPS can get young people to fall in love with the outdoors and national parks, only then can they be successful in outcompeting school, work, and technology for time in young people's busy schedules. In order to create this passion for nature, young people must first be exposed to the outdoors through advertising, publicity, and social media. Next, they must experience nature firsthand.

Finally, repeated, positive experiences with the outdoors can eventually lead to a connection with nature and passion for the outdoors.

Chapter 6: Conclusion

It appears that young people today still have an interest in the outdoors and a desire to spend time in nature. As young people try to balance the demands of school, work, and extracurricular activities, time for nature is often lost. However, I found that young people who are passionate about nature find a way to make time for it. Therefore, instilling a love for nature in children and young people will help to keep future generations in touch with the natural world.

These findings bode well for the National Park Service, as they are currently trying to increase the number of young people visiting the parks. In recent years, the national parks in this country have been facing what has been called a “diversity crisis,” with young people and minorities accounting for a relatively small portion of park visitors. Since today’s young people will be responsible for the future preservation and conservation of our national parks, it is important that they care about them, and the best way to instill this care is through firsthand experiences with national parks. Although national park visitation among young adults is currently low, young people do have a strong desire to visit national parks. Therefore, the National Park Service has not lost the interest of young people in this country.

As this research was based on previous research conducted by professor Barton, I was able to follow a model for my research, compare my results with previous findings, and address some limitations from the previous study (Barton 2012). The methods which Barton used provided academic rigor to the study by providing it with both quantitative

and qualitative results. The two results could be used to compliment and support each other. For this reason, I chose to use Barton's methods as a model for my own. The quantitative nature of the survey results made them easy to report, as they could be statistically analyzed and presented in the form of charts and graphics or included within the text. The open-ended questions of the focus group provided additional insight by encouraging ideas and thoughts, which I had not considered or accounted for in the survey, to be discussed and addressed in the results. Additionally, having a similar methodology allowed for the comparison of results between Barton's study and this study. Since the results from this study replicated Barton's, it provided credibility to both studies.

One of the biggest limitations in Barton's research was the location of the study, the University of Northern Colorado. This university is surrounded by public lands and located in close proximity to Rocky Mountain National Park. Barton acknowledged that this may have produced nature biased results in her study which are not representative of the entire population of young people in the United States. By conducting the present study and replicating the results in a location with limited access to public lands and national parks, this study served to eliminate this nature bias and provide results more representative of the entire population of young people in the United States, reducing the biggest limitation of Barton's study.

The biggest limitations of the present study were due to a lack of time and funding. Although I had an adequate sample size for the surveys, I would have liked to have conducted more focus groups and with more focus group participants. Participants

were more reluctant to dedicate their time to the focus group than to the survey. Although 211 students participated in the survey, only 48 provided email addresses indicating that they would be interested in participating in the focus group. Of the 48 students who provided email addresses, only about ten students responded to emails regarding the focus groups. In the end, only eight students participated in the focus groups. Students who did participate in the focus groups tended to be very active in the outdoors already. This may have given the focus group results a slight bias towards nature. Increasing the number of focus groups and focus group participants may have helped to reduce this bias. More time in my schedule and more money would have been helpful in achieving this goal. Lastly, I would have liked to have visited more National Parks and spoken with more NPS employees to gain a greater understanding of the NPS's perspective on this topic. However, like most college students, as highlighted by this thesis, I lacked the time and funding to travel to multiple National Parks to accomplish this goal.

In order to disseminate this research, I hope to publish it in a peer reviewed geography journal or a professional parks journal. Additionally, I plan to share this thesis with Professor Barton.

As I built on the work of Barton, I hope that this important line of research will continue to build beyond my thesis. The future of the NPS is dependent upon their ability to get young people involved in the outdoors. Use of the knowledge and ideas generated from this and future research could be beneficial in developing the programs and campaigns needed to encourage and motivate this important demographic. Now that we have knowledge on what is stopping young people from going outside, I believe that

future research on this topic should be directed at better understanding how young people can be encouraged or motivated to get outdoors. This could provide the National Park Service with information on how to develop and implement better programs and campaigns to get young people outside and visiting national parks. As the national parks will be passed on to the next generation's care, the future of the national parks depends on this. Future generations deserve to have the opportunity to visit and explore these beautiful natural lands which have inspired and amazed humans for centuries. I would like my own children and grand-children to be as inspired by the National Parks as I was as a young girl.

Appendices

Survey

Age: ____ Sex: ____ Major: _____ Minor:

Classification:

Freshman: ____ Sophomore: ____ Junior: ____ Senior: ____

Graduate Student: ____

Do you consider yourself a native of Mississippi?

Yes ____ No ____

If not, of where do you consider yourself a native? _____

1. Have you visited any of Mississippi's public lands (e.g., state park, national forests, Ship Island, etc.) in the past 12 months?

Yes ____ No ____

2. Have you visited any of Mississippi's public lands (e.g., state park, national forests, Ship Island, etc.) in the past 5 years?

Yes ____ No ____

3. Have you visited any of America's 59 National Parks (e.g., Everglades NP, Grand Canyon NP, Great Smoky Mountains NP, Hot Springs NP, Rocky Mountain NP, Yellowstone NP, Yosemite NP, etc.)?

Yes ____ No ____

If yes, list the park(s) you have visited.

4. How many hours per week do you spend outdoors for leisure purposes?

< 5 ____ 5-10 ____ 10-15 ____ 15-20 ____ >20 ____

5. How many hours per week do you spend using electronic media, such as, television, video games, computers, cell phones, and other hand held electronic devices?

< 5 ____ 5-10 ____ 10-15 ____ 15-20 ____ >20 ____

Of these hours using electronic media, approximately how many hours are for school and work purposes?

Of these hours using electronic media, approximately how many hours are for entertainment purposes?

Would you like to participate in an interview for this research?

Yes _____ No _____

If yes, please provide an email address so that I may contact you:

Below are a number of statements regarding attitudes towards the outdoors and National Parks. Please read each statement and indicate to what extent you agree or disagree.					
Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1. I would like to spend more time outdoors.					
2. I would like to spend more time visiting U.S. National Parks.					
3. Costs get in the way of my visiting parks and public lands.					
4. Transportation gets in the way of my visiting parks and public lands.					
5. Lack of time gets in the way of my visiting parks and public lands.					
6. Lack of time gets in the way of me going outdoors.					
7. As a child I visited National Parks with my family.					
8. As a child I spent most of my free time outdoors.					
9. Today I spend most of my free time outdoors.					
10. Today I spend most of my free time indoors on technology.					
11. I have very little "free time."					
12. School and/or work prevent me from spending more time in nature.					
13. I live far away from nature.					
14. Watching videos about nature inspires me to spend more time in nature.					

15. Pictures and videos of nature are sometimes better than the real thing.					
16. I think conservation and preservation are important.					
17. I think National Parks are an important part of this country.					
18. I think National Parks are a place to be physically active.					
19. I would like to participate in more outdoor activities such as mountain biking, hiking, rock climbing, kayaking, whitewater rafting, trail running etc.					
20. Technological devices (cell phones, TVs, computers, video games, etc.) distract me from spending more time outdoors.					

Focus Group Moderator's Guide

1. Introduction and introductory activities

Hi, my name is Addy Falgoust, and I am a senior geography major with a minor in biology. As you may already know, this focus group is part of my research for my honors thesis, *Young People's Perceptions of Nature and Interactions with National Parks*. The topics that we discuss in this focus group will be similar to those of the questions that I asked in the survey. This will include discussing time spent outdoors, interactions with U.S. National Parks, and time spent using technology. This research was inspired by a National Geographic article that my advisor shared with me. The article discussed how National Parks are currently lacking young visitors. This is an issue since the millennial generation will become the next generation of leaders and lawmakers responsible for the conservation and preservation of these areas. In order for the National Parks Service to increase the number of young people in the parks, they must first understand what young people's perceptions of nature are. This will allow them to develop strategies to engage more young people. This research and your input will help to provide this important information.

Now that you know a little bit about me and my research, we will go around the room and have everybody introduce themselves. Just state your name, major, and one hobby you enjoy.

2. Statement of basic rules or guidelines for the interview

I am going to introduce a topic and several questions that relate to the topic. There will be 6 topics total, and we will discuss each for about 10 minutes. Anyone can answer these questions, and in any order. Think of these questions as a guide to help you discuss this topic. You do not need to answer every question and feel free to provide additional information that may be relevant. Please be open and polite to the person speaking. You do not need to be called on to speak, but please allow others to finish their thought before speaking, rather than interrupting them. Please be respectful of others opinions, even if they differ from your own. All opinions here are valuable, so it is important that we create an environment in which you all feel comfortable being honest. The audio from this focus group will be recorded for research purposes only. It will be used to supplement the notes that I take. The audio recording will be kept confidential, and names will not be attributed to responses. Are there any questions?

Topics and Questions

1. Time spent outdoors
 - a. Do you enjoy spending time outdoors?
 - b. How much time do you spend outdoors?
 - c. Would you like to spend more time outdoors?

2. Activities outdoors
 - a. What activities do you do outdoors?
 - b. Are there any outdoor activities you would like to participate in?

3. Attractions and constraints
 - a. What factors make you want to spend time outdoors?
 - b. What factors stop you from spending time outdoors?
 - c. Have you had any positive experiences outdoors?
 - d. Have you had any negative experiences outdoors?

4. National Parks
 - a. What do you think of the National Parks in this country?
 - b. Have you visited any National Parks?
 - c. If so, how was that experience?
 - d. Would you like to visit more National Parks?

5. Technology and nature
 - a. Has technology ever inspired you to go outdoors? (Pictures on social media, nature documentaries, outdoor adventure movies...?)
 - b. Has technology ever interfered with your time in nature?
 - c. Does your time spent on technology stop you from going outdoors?

6. What would allow you or encourage you to spend more time outdoors?
 - a. Group programs?
 - b. Volunteer work?
 - c. Technology?

IRB Approval Letter



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NOTICE OF COMMITTEE ACTION

The project has been reviewed by The University of Southern Mississippi Institutional Review Board in accordance with Federal Drug Administration regulations (21 CFR 26, 111), Department of Health and Human Services (45 CFR Part 46), and university guidelines to ensure adherence to the following criteria:

- The risks to subjects are minimized.
- The risks to subjects are reasonable in relation to the anticipated benefits.
- The selection of subjects is equitable.
- Informed consent is adequate and appropriately documented.
- Where appropriate, the research plan makes adequate provisions for monitoring the data collected to ensure the safety of the subjects.
- Where appropriate, there are adequate provisions to protect the privacy of subjects and to maintain the confidentiality of all data.
- Appropriate additional safeguards have been included to protect vulnerable subjects.
- Any unanticipated, serious, or continuing problems encountered regarding risks to subjects must be reported immediately, but not later than 10 days following the event. This should be reported to the IRB Office via the "Adverse Effect Report Form".
- If approved, the maximum period of approval is limited to twelve months.
Projects that exceed this period must submit an application for renewal or continuation.

PROTOCOL NUMBER: 17011904
PROJECT TITLE: Young People's Perceptions of Nature and Interactions with National Parks
PROJECT TYPE: New Project
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DEPARTMENT: Geography and Geology
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Lawrence A. Hosman, Ph.D.
Institutional Review Board

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