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### College Students' Perceptions of the Desert Canyons of the Colorado Plateau

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UNIVERSITY OF NORTHERN COLORADO

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COLLEGE STUDENTS' PERCEPTIONS OF THE DESERT  
CANYONS OF THE COLORADO PLATEAU

A Dissertation Submitted in Partial Fulfillment of the  
Requirements for the Degree of  
Doctor of Education

Jeremy Roger Deem

College of Education and Behavioral Sciences  
School of Teacher Education  
Educational Studies

December 2022

This dissertation by: Jeremy Roger Deem

Entitled: *College Students' Perceptions of the Desert Canyons of the Colorado Plateau*

has been approved as meeting the requirement for the Degree of Doctor in Education in the College of Education and Behavioral Sciences in the Department of Educational Studies.

Accepted by the Doctoral Committee

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Christy McConnell, Ph.D., Research Advisor

---

Derek Gottlieb, Ph.D., Committee Member

---

Matthew Farber, Ph.D., Committee Member

---

Scott Douglas, Ph.D., Faculty Representative

Date of Dissertation Defense: 10/19/2022

Accepted by the Graduate School

---

Jeri-Anne Lyons, Ph.D.  
Dean of the Graduate School  
Associate Vice President for Research

## ABSTRACT

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This study investigates eight college students' perceptions of their experiences during an accredited outdoor education course entitled Technical Canyoneering. The course took place in four separate desert canyons of the Colorado Plateau, two in Arches National Park, and two on nearby Bureau of Land Management public space. Utilizing the data collection process of photo-elicitation, the participants' time spent in the canyon settings was described in order to gain an understanding of their experiences, with particular attention paid to analyzing what perceptions those students ascribed to those experiences. The intent was threefold. First, the study makes understanding at how college students perceive the wilderness environment of the course. Secondly, the study demonstrated the beliefs, values, and commitments that are fostered and/or furthered secondary to the students' perceptions of the place. Thirdly, the study attempted to explicate the value of the desert canyons of the Colorado Plateau and, more broadly, "wilderness" settings as educational venues. The qualitative methodology of educational criticism and connoisseurship guided the study.

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## CHAPTER I

### INTRODUCTION

#### **Prologue**

Perfect Kiva, sheltered deep within Bullet Canyon, in Grand Gulch Wilderness Area, Cedar Mesa, Utah, reeks of a musty, worryingly virus-like-smelling odor. Both aridity and dankness simultaneously pervade. It is eerily dark, with only a glimmer of light beaming in from above; it faintly illuminates the students' faces. Sometimes they appear fearful. Sometimes they look contemplative; others are meditative, deep within a world of their own ruminations. Scarcely a sound is heard. Eyes are closed, occasionally a pair flitter around the interior of the cylindrical interior. This day, Samantha weeps. It is a slight whimper, scarcely detectable to the ears. The lower divots of her eye sockets, and also the tops of her cheeks, glisten with tears. She trembles. Samantha remains this way for an hour. She scarcely holds up her own weight when we eventually, gently, persuade her from the ancient ceremonial cavern. Little known to me at the time, this event, which occurred over a decade ago, was one of many occurrences over the years that eventually led me to this study.

The next morning, in the pre-dawn desert still, we awaken in tents, three miles from Perfect Kiva, near the exodus of Bullet Canyon. Samantha approaches us, the instructors, as we roll to light our small stoves. "I have to tell you something," she confides in a whisper. Perceiving that this necessitates confidentiality, we rise and step away from camp, away from the other students who are rousing as the black sky turns to gray in anticipation of daylight. The air is still cool.

She reveals that she'd left her body the previous night. After lying down and falling asleep, she floated above herself and gazed upon her silent figure, nestled still in a cozy sleeping bag. She moved back down Bullet Canyon, down the cliffs where we'd passed packs the previous afternoon, down alongside the trickle of a waterfall, through the boulder-hewn canyon bottom, into the snaking arroyo leading to Perfect Kiva. The twenty year-old met a deceased relative, and a future son along the way, stopping briefly and speaking calmly with them as she drifted down-canyon. She came to a halt at the entrance to the ruins at Perfect Kiva. Two figures appeared at the edge of the kiva, a man and a woman. They spoke a language that should have been indecipherable to her; but she understood, and replied to them in the same idiom. We asked her questions such as "What did they look like? What were they wearing? What did the language sound like?" She made detailed descriptions, but couldn't describe the dialect. "What language would the ancient people have spoken here?" she asked. "I need to hear it." We're not sure. We make some guesses. "I have to hear it," she repeats. We can't help her, at least until we have internet service; and then we may hazard a try. She recounts that she remembers then seeing herself in her sleeping bag from above, again, and then re-entering the sleeping world. Was it a dream, we wondered? Her cheeks were wet again with light tears. Regardless of ours, or the readers' of this story, interpretation of Samantha's experience, her perception of it was as a real occurrence. Ethereal as it might have been, to her, the experience happened as true as we were camping in the desert that spring morning.

I began my career in education instructing courses for the Colorado Outward Bound School. I hesitate to call it the beginning of my career, because it was really my yearning to spend more time in the outdoors than it was to move into the field of education that inspired me to move from guiding rafts on the rivers of West Virginia to the field of outdoor education.

Colorado Outward Bound School granted me the responsibility of leading high school students into remote venues of the Rocky Mountains, the desert canyons, and the long river stretches of the American Southwest. For 14 to 23 days at a time we left behind civilization, accompanied by only the technologies that helped us to navigate through these landscapes—primarily backpacks, ropes, and boats.

I initially viewed my goal as an instructor to be accomplishing the task of teaching students how to utilize our limited technology to move efficiently through the ethereal venues. We mastered stuffing our stuff-sacks, packing our packs, paddling our kayaks. We learned the figure-8 knot, the meaning of a “highside,” and the taut-line hitch. We cooked our dinners over small, aircraft-aluminum backpacking stoves, and nestled in at night into rows of down sleeping bags under meticulously erected nylon tarps. Students adroitly absorbed these skills; and after a week or two in the woods, we found ourselves with time on our hands. This is where the true learning began.

Samantha’s story began in the same way—as an interest in getting away from the confines of our contemporary modern-day lifestyles. She had expressed an interest in becoming a wilderness paramedic—an Emergency Medical Technician (EMT)-Paramedic that operates within austere environments. Her study of emergency medicine had already brought her up to the level of a “Wilderness Emergency Medical Technician (W-EMT)” and she participated in various outdoor-based courses, like the one in the story above, in order to strengthen her skills within austere settings and rugged environments. She had taken several courses with me, and up until the incident described above, I would have described her as a driven, down-to-earth, serious type of student and person. The incident in Perfect Kiva, and the subsequent relaying of her out-of-body experience that night in Bullet Canyon was extremely out of character for her. But she

took comfort in sitting with me, or with that other instructor on the course, whenever she got the chance after the event, as we provided her with a safe environment to re-live and to re-tell the story without judgement, time and time again. She felt embarrassed by it, but when she was with us, she opened up.

I don't know what exactly happened to Samantha in Perfect Kiva and in Bullet Canyon that night. What I can discern, however, is real emotion and with Samantha I have scarcely witnessed such a raw feeling of belief in an experience. She never defended her story—she simply recounted it, exactly the same way, over and over. I have come to recognize that an individual's perception of an experience depends on multitudinous factors; and taking it one step further, people's perceptions of experiences within remote outdoor settings has predominant factors that make those experiences extraordinarily individualized. They do have one thing in common, however—they are generally powerful, and influential experiences of which the individual holds personalized and nuanced perceptions. The individual's pre-experience characters – their intentions and expectations – alter the experience; and in turn, the experience alters their characters.

### **Study Rationale**

This study explores how college students develop powerful perceptions of their experiences in the backcountry setting. Through the students' own pictures and words, I will narrate the environment of the desert canyons of the Colorado Plateau. The reader will develop an understanding of not only the places in which their experiences took forth, but also how those individuals' intentionality interacted with those environments to form perceptions. The appreciation of students' perceptions goes on to present an example of the utilization of public lands backcountry as an educational venue. In striving to complete responses to three research

questions, my hope is that this work will add a piece to that missing book of knowledge regarding outdoor educators' beliefs that remote backcountry settings truly are valuable venues for the offering of educational courses, but also that there are certain key elements of students' intention and perception that provide transferable knowledge for educators within any discipline, operating within any venue.

### **Purpose**

The purpose of this dissertation was to study college students' perceptions of the desert canyons of the Colorado Plateau. The purpose of *Inimitable Intentions*, in proposed form called *Value as a Venue*, was initially intended to demonstrate that remote backcountry environments provide uniquely prescient settings as educational venues. There was an underlying goal of providing another anthropological "value" to backcountry public lands, in that we, as a species, or at least as community members and citizens of our states and of the union of the United States – that perhaps seeping to the international scale – might thereby possess another reason in argument of the protection of untrammelled outdoor spaces. These are beliefs that I still hold; however, this study has taught me that students' perceptions of their backcountry experiences are based largely on their individualism and its commensurate intentionality. From that lesson, I speculate that the greater purpose of this study is as an informant of all educators, operating within multitudinous venues across the globe. Utilizing the lessons garnered from this study to inform our pedagogy with an acute awareness of the value of our students' individuality and intentionality, we may take a piece of this research into the future.

### **Educational Criticism and Connoisseurship**

I utilized the methodology of educational criticism and connoisseurship (ed crit) in the development of this study. Elliot Eisner (1976) developed ed crit over the course of decades

beginning in the 1960s as a way to improve the educational process through incorporating alternate means of description—thick, rich, detailed, artistic, perceptive, representative description—in forms of educational research. The describer of the events that transpire through the research is the connoisseur – one who has nurtured an appreciation of a discipline to the degree that, in Eisner’s (1976) words, “an awareness and an understanding” of an experience of that discipline “provides the basis for judgement” (Eisner, 1976, p. 140). Ed crit provided a relevance to this study as the students’ experiences herein necessitated insightful, connoisseurship-level, meticulous and descriptive interpretation. This study details the sensory-overloaded experiences of students who traversed through some of the most magical and inaccessible wilderness landscapes on earth, the internals of technical canyons of the Colorado Plateau, in and proximate to Arches National Park. The descriptions of their experiences in the environment required that the researcher not be bound to conventional means of data analysis, but to the inspired perceptivity of a connoisseur of backcountry-based educational ventures.

### **Research Questions**

Through my own observations over the course of more than two decades as an educator operating within difficult-to-access natural settings, I’ve come to believe that many students experience transformational learning in terms of a development of their passion for life, which in turn leads to greater empathy, compassion, community involvement, and other productive interests and commitments. Kurt Hahn, founder of the Outward Bound School, and a seminal influential educator to my career, stated that this, the building of character and morality, is a key component as an educational outcome. In a 1965 address on Outward Bound, Hahn noted that the experience of the program “is apt to evaporate, leaving no trace on future conduct, unless the Outward Bounders, in their normal surroundings, will translate it into action—in other words,

unless they seek and find opportunities for a demanding active service of use to their fellow men” (p. 6). I believe that many factors are involved in whether or not a particular immersive experience of any type, not just one in an austere natural environment, “flips the switch” for students who have the potential to experience a transformational change in their psyche. Among these are the level of comfort that they feel with their fellow students, the competence of the course instructor(s), the allowance and encouragement by the course instructor(s) to develop a cultural environment that allows for transformational experiences, the weather, the backcountry environment in which the students are immersed (i.e., mountains, desert, river, ocean, etc.), the occurrence of “near-misses” or frightening events during the course, and many other factors. In this study, I gained insight into eight college students’ perceptions of their desert canyon immersions, and from those perceptions, investigate the value of those places as educational venues from the standpoint of the Deweyan concept of an educative experience. My research analyzes those college students’ experiences in their accredited backcountry-based outdoor education course, entitled Technical Canyoneering. Three research questions frame the study:

- Q1 How do college students perceive their wilderness immersion experiences?
- Q2 What beliefs, values, and commitments do students foster in response to their perceptions of wilderness immersion?
- Q3 What do these students' experiences inform us about wilderness immersion as a component of educational programming?

### **Research Question One**

- Q1 How do college students perceive their wilderness immersion experiences?

Perception is a more contemporary equivalent to what Dewey describes as “images.” He wrote, “The image is the great instrument of instruction. What a [student] gets out of any subject presented to him is simply the images which he himself forms with regard to it” (Dewey, 2013,



p. 6). In “The Exploration of the Outward Bound Process,” Victor Walsh and Gerald Golins (1976) contend that the outdoor environment provides an “especially potent” (p. 4) setting in which to pursue educational objectives. The outdoors are highly stimulating; those immersed in the outdoors must learn follow the rules of nature, rather than contrived human-made parameters of ‘civilized’ existence; and the tasks performed in the outdoor setting are straightforward but not necessarily easy or inconsequential (pp. 4-5). Students are removed from that which they know, and are placed in a place that contrasts that which they are used to being within. This first research question puts these two components together, and is guided by a simplistic principle, to determine how college students perceive their backcountry immersion. As I will explain in the study design, students were guided through the use of their own photographs to provide their perceptions of their experiences in the wilderness setting. This photo-elicitation aims to specifically seek out the perceptions that the students drew from their experiences in the desert canyons.

### **Research Question Two**

Q2     What beliefs, values, and commitments do students foster in response to their perceptions of wilderness immersion?

In both *My Pedagogic Creed* and *Experience and Education*, Dewey (1938) argued that educative experience is, “a process of living and not a preparation for future living” (p. 7). Dewey permitted, however, that the experience holds added value if it “arouses curiosity, strengthens initiative, and sets up desires and purposes that are sufficiently intense to carry a person over dead places in the future” (p. 38). This question investigates the beliefs, values, and commitments that students foster in response to their perceptions of their wilderness immersion. I demonstrate how the experience of being in the wilderness during the technical canyoneering course may or may not have fostered distinctive beliefs, values, and commitments as an outcome

of their perceptions of their immersions. *Distinctive* is defined as something that has qualities that distinguish it remarkably from others. Here, I examined the beliefs, values, and commitments of the students in the study that the students fostered as a result of the experience. I also looked specifically at those that stood out, both individually and/or mostly or unanimously. The distinctive beliefs, values, and commitments that shone forth from these experiences are discussed at length in Chapter V.

### **Research Question Three**

Q3     What do these students' experiences inform us about wilderness immersion as a component of educational programming?

This question begets at the intentional dimension of Eisner's (1992) ecology of schooling. He asks, "...what is it that schools are intended to accomplish? What really counts...?" (p. 619). Dewey (1938) held that two criteria are necessary in order to make for a valuable educational experience. Uhrmacher et al. (2017) explain the first criteria as meaningful engagement, "in which groups and individuals intently take part in solving problems, formulating questions, identifying resources, acting, and then reflecting on that action" (p. 13). Dewey calls the second criteria for a valuable educative experience "continuity." He maintains that in order for an experience to hold value, it must contribute to instilling a curiosity in the student that in turn leads to continuing ethical or scholastic growth (Dewey, 1938, pp. 33-50). He wrote that the principle of continuity is involved in the process of educational experiences, "in every attempt to discriminate between experiences that are worthwhile educationally and those that are not" (Dewey, 1938, p. 33). This question flips from the direct constructs of students' perceptions and the principles that are fostered during their experiences to questioning the role that the immersive experience in the wilderness venue plays directly into molding those students' perceptions. It goes beyond the individual student, as the first two questions approach, to

informing intentions for educational programming. I analyzed the students' perceptions in order to make an evaluation of whether the wilderness immersion experience hold up to the standards of (a) being meaningfully engaging; and (b) upholding continuity. By looking at the value of the educative experience as defined by Dewey, through the evaluative lens of Eisner, the study wrestles with summarizing conclusions to this question in Chapter V.

### **Summary**

In this chapter, I have provided an introduction to this study; a rationale for the need for a study such as this, balanced with a purpose for the study; a more thorough overview of the methodology that I used to conduct the study, educational criticism and connoisseurship; and a more thorough overview of the research questions. The introduction outlined the miraculous learning that I have witnessed throughout my decades-long career as an outdoor educator that led me to the belief that a study such as this should occur. The study rationale framed my beliefs and opinions into academic structure, highlighting the need for the study. The purpose explained how my initial ambitions for the study changed into a purpose that may work to serve students and educators into the future, morphed by my findings during the study. I summarized the methodology of Educational Criticism and Connoisseurship, explaining why it best served the study at hand. I introduced the three research questions that guided the study, and foreshadowed how those three questions ended up playing out in the research. The sections of Chapter I present the study to the reader in a clear and simplistic manner. Chapter II provides an overview of the foundational perspectives and the extant literature that frames this project.

## CHAPTER II

### REVIEW OF THE LITERATURE

The purpose of this dissertation was to study college students' perceptions of the desert canyons of the Colorado Plateau. This chapter reviews key terms and the extant literature pertinent to this study. I have divided the chapter into several sections. I begin with an explanation of how I utilize several terms that are referred to throughout the study. I move then to a review of the literature where I explain how I came to an understanding that this study will fill a gap in the extant research literature, and likewise explains and outlines the three sections that follow the introduction. The three sections that follow the introduction contextualize this study within the volumes of similar literature, placing it both within those volumes, and also highlighting the detail that the study is acutely unique in terms of its contribution to those volumes.

#### **Key Terms**

Throughout this study, I reference several terms that require nuanced clarifications of their meanings herein. The following is a list of those particular terms, alongside the corresponding clarification.

**Adventure:** Benjamin Ingman (2013) authored a dissertation entitled *Rethinking the Adventure Education Experience: An Inquiry of Meanings, Culture and Educational Virtue*. Within the section entitled "Illuminating Terms," the first term that Ingman explicated was, like here, "Adventure" (Ingman, 2013, p. 19). In that subsection, Ingman offers an excellent meaning to the word, academically supported by past representations of adventure-related

studies. I would encourage any reader further interested in this field to explore Ingman's work. For the sake of this study, however, I quote from Ingman as to where he settled on the explanation of adventure for his study. "I aim to let adventure mean what we collectively think it means," he wrote; and here, I intend to do the same. Merriam-Webster (n.d.-a, n.p.) offers text to support this meaning, defining adventure as "an undertaking usually involving danger and unknown risks," and "an exciting or remarkable experience."

**Beliefs, Values, and Commitments:** These terms are framed within research questions one and two, and then led to further investigation in research question three. I have relied on the peer-reviewed, academic resource, The Internet Encyclopedia of Philosophy (IEP) to guide my succinct definitions of the terms that I provide in order to provide clarification on the meaning of these terms within this study.

**Belief:** Accepting with trust and faith that something is true.

**Value:** A principle or attitude that guides one's belief about the worth of something.

**Commitment:** The state of having strong enough beliefs about a being, place, element, cause, activity, or other thing, and holding that in a state of value that one dedicates a portion of their being to promoting a relationship with, or advocating in some way on behalf of that being, place, element, cause, activity, or other thing.

**The Contrasting Environment: Austere, Backcountry, Difficult-to-access, Natural, Remote, Wilderness: Environment, Place, Setting.** In this study, I have used the terms "austere," "backcountry," "difficult-to-access," "natural," "remote," and "wilderness" interchangeably. These words are sometimes paired with any one of the following nouns: "environment," "place," or "setting." The primary research I conducted for this study

focused specifically on students' experiences that took place within desert canyons of the Colorado Plateau. Two of the canyons, as we have explored, are within Arches National Park; and two are located in the Moab Bureau of Land Management (BLM) district, public lands proximate to Arches National Park. When most prudent and when possible, I have referred and dutiable referenced the specific landscape in which the students were immersed, such as the desert canyon environment. I refer at times, however, more broadly and generically to all environments that comprise an aspect of austerity that puts the adventurer within those environments at an elevated level physical and/or emotional risk.

I do not expressly state this anywhere else in this study, but as a practitioner of ventures within those environments, my outlook on backcountry, austere, difficult-to-access, natural, remote, and wilderness – environments, places, and settings – is fostered through a background and an erudition in wilderness medicine. I am certified as a National Registry of Emergency Medical Technicians (EMT)-Basic, and also maintain a Wilderness-EMT (WEMT) upgrade certificate. My training and my experience, both as a practitioner of wilderness ventures and as a WEMT have led me to understand these environments as areas, or locations, where any combination of three circumstances are in place: access is difficult due to terrain or a combination of terrain and weather, posing risks to participants, patients, and rescuers; the setting poses challenges to communication with the world outside of the place; the setting poses challenges which elongate transport times to modern medical facilities. I personally, somewhat subconsciously, scale the level of extent to which it is truly one of the interchangeable terms, of every environment in which I am immersed in life; and I consciously, as a

matter of prudence, scale the level of severity of those places where I operate in the capacity as a leader, whether that be guide or instructor in my profession.

I offer two examples of these environments in which I've operated. Sapphire Point Overlook Trail is a 0.6 mile loop near the college where I work in unincorporated Summit County, Colorado. The trailhead is just off of Swan Mountain Road, a cutoff between Colorado State Highways 6 and 9. I facilitate a hike around this forested loop during the more temperate seasons of the year as a field trip for some history courses that I teach. Some of my students, view it as backcountry. I place it low on the scale of its "backcountry-ness," due to the fact that the hiking path on which we tread is fairly flat and wide; the ground is firm; we don't go if the weather is inclement; cell coverage is excellent; ambulance and helicopter access is relatively simple – in fact, we can see the Flight for Life air ambulance helicopter hangar in Frisco from the hike, and the helicopter has landed in the trailhead parking lot at times; there is a level 3 certified trauma center just a couple miles away, and a level 1 certified trauma center (the highest level in the United States) in Denver, just an hour by ambulance or 18 minutes via helicopter. Sapphire Point keeps my WEMT senses on low alert. I have thus far only visited the second environment that I will outline only once; and even before reaching the place, it rendered my WEMT sensibilities at the top of the scale. The Zaskar River runs through the Zaskar Range of the Himalayan Mountains in the province of Jammu & Kashmir, northern India. The region is disputed, with Pakistan also periodically making claims to the region. There have been clashes in the area throughout the years between Pakistani, Indian, and an assortment of ethnicities who all claim right to the region. The put-in for the 11 day river trip is at nearly 4,000 meters above sea level. There is no phone service,

and once in the depths of the canyon, satellite service is also unattainable. The water is rated Class IV at normal flows, and consists of icy, glacial runoff. There are few inhabitants within the canyon, and those that there are continue to live a subsistence-driven, traditional existence. There are no modern amenities. There is no ambulance service, no air medical transport service; and the nearest contemporary medical facilities are thousands of miles away. The expedition was essentially cut off from the outside world once launched into the Zanskar River canyon, entirely self-reliant. The reader of this manuscript may ascertain the level on the scale of “backcountry-ness” that I placed the Zanskar – extremely high.

I respect the history behind the terms that I’m outlining in this section; and I likewise respect all viewpoints and understandings of these terms, from the once-in-a-lifetime Sapphire Point hiker, to the most seasoned expeditioners on the planet. For the purposes of this study, however, I hope that this clarification of the terms serves as a template for achieving some understanding of the author’s meaning behind the words. As for the canyons of which are described within this work, they fall somewhere nearly right in between the Sapphire Point Overlook Trail and the Zanskar River canyon in terms of their “backcountry-ness,” according to the parameters that I’ve set forth which make a place more or less in that category. For the sake of full clarification, for the generic use of the any of these terms, one may appreciate the scale which I’ve described. As for the specific canyons in which we ventured, being smack in between Sapphire Point and the Zanskar on that scale, I call Rock of Ages Canyon the most “backcountry,” followed in quick succession by Tierdrop, Medieval Chamber, and U-Turn canyons. Each of them face access, communication, and transport times issues that, with students in my care,



kept my WEMT sensibilities acutely alert and on the ready during the technical canyoneering course that I describe within this study.

**Experience and Experiential:** I utilize the term experience extensively through this study, particularly in my descriptions of their perceptions that they derived from their time spent during the technical canyoneering course. The word, however, remains ambiguous. In *Beyond Learning by Doing : Theoretical Currents in Experiential Education*, Jay W. Roberts (2011) documented the historical roots of experience in education, positing that two of the key educational philosophers that I've founded this study on, Kurt Hahn and John Dewey, "...used and reacted against Greek notions of experience in formulating their own philosophies of experience in education (p. 15). Roberts' book offers a detailed examination of the historical roots of the term experience; an overview of philosophers from various disciplines' take on the meaning of experience; and lessons on the application of experience to the educational setting. Overall, Roberts' take on experience is leveled at its practicality and value as a construct in education.

Is an experience itself the meaning of the experience; or, is the meaning of an experience to advance the experiencer's being in some way? Did the students in the technical canyoneering course that I describe in this work have the experience in those moments in which they lasted, limited strictly to the act of technical canyoneering? Or, did their experience in those moments lead to other, perhaps even deeper, life lessons than those of using ropes harnesses and their own human power to descend through four canyons of the Colorado Plateau? This term, given its historically philosophical ambiguity and problematic roots within educational philosophy, will be left likewise undefined in this outline of terms. The course itself was so deeply experiential that I will

allow the reader to form her own opinions about the meaning of experience for the eight students in this study.

I use the term experiential substantially less in this work; as the course in which the students in this study participated may be considered by all parameters an experiential learning environment, however, likewise, to offer the reader the opportunity to apply their constructs of the meaning of these students' experiences to construct their own understanding of experiential. Again, did their perceptions offer the students here an educational one, as defined by Dewey: "The ultimate aim of education is nothing other than the creation of human beings in the fullness of their capacities" (as cited by Boydston, 1988, p. 289). I believe that no individual experience, educational or otherwise, can encompass every objective in the course of a learner's lifetime. But were the experiential classrooms that were the canyons of the Colorado Plateau contributive to these students' overall educational pathways, as defined by the standards of Dewey? May the reader formulate that opinion on her own.

**Perceive and Perception:** Demonstrating findings from the research questions in this study rely heavily on what the participants perceive; those are oftentimes referred to as perceptions. For the purposes of this study, I have drawn upon the work of Eisner to render a meaning for the terms perceive, and thereby, perception. Eisner (1979) explained,

The art critic finds himself or herself with the difficult task of rendering the essentially ineffable qualities constituting works of art into a language that will help others perceive the work more deeply. In this sense, the critic's task is to function as a midwife to perception, to so talk about the qualities constituting the

work of art that others, lacking the critic's connoisseurship, will be able to perceive the work more comprehensively. (p. 191)

Eisner utilized the terms perceive and perception like this example quite frequently in his writings. An encompassing explanation of perceive, as broadly exemplified by Eisner, for this study, I have refined the term to this: To interpret, to become aware or conscious of, to come realize, and to come to understand, and to develop beliefs and values about, through an amalgamation of all of one's senses, some entity, being, place, or other thing.

### **Review of Literature**

When students begin to weave the experiences from their outdoor adventures back into their everyday lives, the result is what Henry David Thoreau (1978) would have described as the innate interconnectedness between humans' lives and the natural world. It is one, however, that has been largely lost to the modern civilization. "I wish to speak a word for Nature," Thoreau wrote, "for absolute Freedom and Wildness, as contrasted with a Freedom and Culture merely civil, - to regard man as an inhabitant, or a part and parcel of Nature, rather than a member of society" (Thoreau, 1978). Environments that are set apart from the urbanized trappings of contemporary life, or "Nature," as Thoreau called it, provides a setting for learning that is difficult to duplicate; although, through the process of this study, I have come to understand that nuances in how students enter into, and also how they perceive, their educational experiences provide meaningful insight into how all educators might view and approach their pedagogy, regardless of the venue. Just about anyone who has facilitated courses in the remote outdoors knows that students' lives are oftentimes impacted in unpredictable and nearly incalculable ways; but as this study attempts to demonstrate, the individualized intentions that students bring with them to their educational experiences, in any setting, may be more precisely targeted as an

interest for the educator striving to solicit deeper and more meaningful engagement of her students.

Outdoor educators can share stories of students who have experienced transformational outcomes as a product of their backcountry immersions; and then, just about all experienced educators from all disciplines and venues can say the same. Outdoor educators generally agree that even for students who did not undergo life-changing revelations, the majority of students take away from their courses an enhanced perception of their own self-being. They also believe that the experience was of importance and value in their overall life. These are sentiments that outdoor educators take for granted, but as I have searched for proof of this, I've found that scant published research that a) describes individual students' perceptions of their wilderness experiences; b) offers students the opportunity to ascribe personal values and ethics that are fostered as a result of their experiences in wilderness settings; or c) inform educational practitioners about the value of wilderness immersion as a component of educational programming. I submit these as three – while not entirely lacking, but largely–dearth in literature that beg investigation.

This study is the result of my yearning to place power in the voices of students who studied within a wilderness environment. I have placed the participants' connectivity to the environment as the forefront component of focus in order to place an article of literary research into the annals which currently do not address the dearth of which I have described above. The project herein details students' perceptions; and through those narratives, I proffer evaluations on the second and the third deficiencies in research. Prior to that, however, I offer here as a literature review a presentation on three segments of extant literature, divided into three sections.

The first section in this review examines literature that most closely represents the type of course that the participants in this study embarked upon. Historical roots of the experiential learning environment will be reviewed, and then narrowed to a specific look at outdoor education and the contrasting environment. The second section highlights the various ways that outdoor education courses have been researched and reported upon. The third section focuses on the relatively small slice of studies of outdoor education courses held in a wilderness setting that also focus on the student experience in their own words. In this final section, I will also demonstrate the dearth of literature in this area that explicitly details the experiences of college or university students.

### **The Experiential Learning Environment**

#### **Two Indigenous Americans' Experiential Processes**

In contemplation of delving into the roots of experiential education, the primary accounts that I'd read over the years written by, or transcribed from interviews of, traditionally-raised Indigenous Americans who recounted their upbringings came to the forefront of my thoughts. Their narratives oftentimes included reminiscences of the educational process, which was, like most everyone's educational process, an amalgamation of many modalities. They frequently leaned more heavily than contemporary curriculums, however, on story-telling, and experiential processes. In this section, I offer first a preamble to the experiential setting, and then two examples of traditionally-raised Indigenous women's accounts of their childhood educational experiences.

The paradigm of experiential learning has been around for perhaps as long as people have been passing knowledge from one to another. It is one of many ways in which people learn. As I researched for this project, however, it became apparent that most works that detail the

progression of experiential education chronicle it from the Western, Euro-American-centric, white-male dominated perspective. That perspective, given that it is the one that leads directly to the specific type of course that I detail in this work – an accredited, American, community college-based Outdoor Education course, designed in a manner stemming from the Outward Bound (OB) process – deserves its due attention. But it would be negligent to recognize that the lineage of which I describe is, and/or has/been the only one. There is memory passed between cultures that is not recorded, and therefore oftentimes not acknowledged in contemporary scholarship, or life, for that matter. I therefore preface the next section with two examples of educational approaches that were also epistemologically experiential. These two examples are from cultures that lived within the environment – like the course that is chronicled in this study – of the American West, the first Numu, and the second Apsáalooke. I encourage the reader to imagine that some of the cultural knowledge from these two examples has been passed on, even if undocumented, into the practices of experiential education that framed the course in which the students highlighted in this study were immersed.

Sarah Winnemucca Hopkins (she also called herself Thocmentony, meaning shell flower), was born into the Piute (Winnemucca's spelling, also seen spelled as Paiute, endonym Numu) nation, near present-day Humbolt Lake, Nevada (University of Minnesota, n.d., pp. 5, 40). She authored the first known autobiography by an indigenous woman from the Americas (University of Minnesota, n.d., p. 1). Entitled *Life Among the Piutes: Their Wrongs and Claims*, Winnemucca writes of her life as a Piute woman during this tumultuous and transitional time period for the Piutes, alongside many Indigenous nations of the West. In the second chapter of the autobiography, Winnemucca narrated a detailed account of her upbringing in the Piute way,

detailing the educative process as she experienced it as a girl growing up; and she also provides some details as to how the boys were educated.

In the chapter “Domestic and Social Moralities,” Winnemucca (University of Minnesota, n.d.) explains the traditional Piute educational process as one in which she was immersed as a child. “Our children are very carefully taught to be good,” she commences the chapter. The first paragraph continues with a description of the stories in which the children are edified. She explains how they are taught not to swear, and to be sincere with everyone. In the second paragraph, Winnemucca explains, “We are taught to love everybody,” continuing, “We don’t need to be taught to love our mothers and fathers. We love them without being told to. Our tenth cousin is as near to us as our first cousin” (p. 39). This sentiment continues throughout the chapter, explaining the educational process as a joyful and compassionate one. Children are instructed to “be kind to both bad and good,” she explained, pointing out that, “this is the way my people teach their children” (p. 42). The compassionate process that she explains is likewise infused with experiential learning opportunities throughout. She explains how the girls mimic their mothers in collecting and preparing foods, keeping the homes orderly, and participating in celebrations. Winnemucca also describes how Piute children learned to hunt by modelling herds of small animals out of mud, laid those out in the herds, and then practiced shooting them with small bows and arrows (p. 45). They worked their way up to live small game, and eventually move on to big game (pp. 41-42). The teachings of most of the Piute’s essential life operations were thus taught in a similar experiential manner. The educational paradigm of the culture as described by Winnemucca was simultaneously fun, meaningful, inspirational, and compassionate, while also being hands-on.

Pretty-shield<sup>1</sup> (1856-1944), a Crow (Apsáalooke) healer, was interviewed, primarily through the means of Plains Indian Sign Language (PISL), in the spring of 1931 by a man that she trusted, Frank B. Linderman. She recounted her life – specifically recounting her life as an *Apsáalooke* female – which Linderman (1932) invited her to open up to him about so that he could transcribe it for posterity. The resulting book, which is a detailed biography, consisting largely of a transcription of her direct quotes, is entitled *Pretty-shield: Medicine Woman of the Crows* (Linderman, 1932). Pretty-shield belonged to the last generation of children raised in an intact traditional Apsáalooke culture (Montana Women’s History, 2014). Pretty-shield narrated a detailed account of her upbringing in the Apsáalooke way, detailing the educative process as she experienced it as a girl growing up in present-day Montana, proximate to the confluence of the Missouri River and a certain Plum Creek (of which presently there are two creeks of that name which run into the Missouri; Linderman, 1932, p. 3).

Pretty-shield speaks of the Apsáalooke educational process as one in which she was immersed as a child. While certain women of her community, the “lodge-cutters,” constructed lodging from long, straight poles and buffalo hides, young girls watched, constructing miniaturesque versions of the larger tents out of sticks and leaves (Linderman, 1932, pp. 137-138). She spoke of how she dressed and undressed a doll that her mother gave her in anticipation of preparing her for motherhood until, “Tst, tst, tst,” she recounted, “I undressed and dressed the doll until I wore it out” (p. 7). She described how an entire village would move from one location to another during different times of the year, every member of the clan participating in actively

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<sup>1</sup> I could not locate a definitive Apsáalooke translation of her name; therefore, throughout this text, I call her the name that she is most commonly known as: Pretty-shield.



helping in the hands-on process in whatever way that they were most suited and able to facilitate the migration (pp. 5-7). Pretty-shield described an educational process in which there was no physical punishment, only that of encouragement and love through a primarily experiential process.

Linderman (1932) asked her to describe her girlhood. After detailing this request, he wrote, “Now she smiled, her eyes full of fun”; and then Pretty-shield began, “We were a happy people when I came onto this world, Sign-talker” (p. 4). She goes on throughout the narrative to reminisce about how everything that she did – and much of that was aimed at her education – was fun, meaningful, inspirational, and full of compassion. She described her learning as “play” (p. 9). She remembered a doll that she carried on her back as a girl, “just as mothers carry their babies;” and she likewise had a small teepee that she pitched beside her aunt’s teepee, just like her mother did (p. 9). If this cannot be considered to be an experiential – and, as Pretty-shield professed, a fun – learning environment, then one never existed. “Did you ever whip your own children?” Linderman asked her. “No, Sign-talker,” she replied, “you know that my people never did such things. We talked to our children, told them things they needed to know, but we never struck a child, never” (p. 9). Pretty-shield’s account goes much deeper into the life and educative processes of her people than Winnemucca did, as Winnemucca’s work focused more narrowly on the genocidal assaults on her people subsequent to her childhood.

In the two short works introduced here, there is an abundance of evidence of fun, meaningful, inspirational, compassionate, and experiential learning environments. This is the spirit of OB, of which the next sections focuses and narrows; and of which the technical canyoneering course of which the students in this research project were immersed. The processes explained by Winnemucca and Pretty-shield mark the work of that process as much as any other

that is described in the following section, these are also extremely influential works, educators and educational researchers, and theories that greatly impact this study. I have begun by introducing the fun, meaningful, inspirational, compassionate, and experiential educational environment; I now move on to what I will frame as the natural educational environment.

### **Forerunners of the Western Experiential Education Movement**

“Early philosophers and academicians noted the importance of experiential education dating back to Aristotle, Plato, and Socrates.” (Kihm & Slawson, 2020, p. 169). Socrates’ *elenctic* method was experiential in that he would respond to questions with questions, prompting those in his tutelage to resource their own faculties in able to come up with solutions. (Knapp & Smith, 2011, p. 19). Akin to the later goals of Kurt Hahn’s desire to through the educational experience, to instill compassion in his students, Plato recognized that adventurous activity could lead to the development of virtue (Stonehouse et al., 2011, p. 20). Through the discourse of his *Nicomachean Ethics*, Aristotle also purports that an educator’s “ethical enterprise is not to provide a moral argument, but to make us good” (Stonehouse et al., 2011, p. 22).

The Czech philosopher and early proponent of universal education Johann Amos Comenius (1592-1670) may be credited with an early affinity for putting students into natural settings as an educational goal. In Chapter XIV of Keatinge’s (1923) translation of *The Great Didactic of John Amos Comenius*, many ways in which a student may learn from the outdoors are examined, from watching a fish to learn to swim, to mimicking thunder through the concoction of gunpowder. “It is now quite clear,” he wrote, “that that order, which is the dominating principle in the art of teaching all things to all men, should be, and can be, borrowed

from no other source but the operations of nature” (p. 100). Indeed, the chapter is entitled “The exact order of instruction must be borrowed from nature” (p. 23).

The Swiss philosopher Jean-Jacques Rousseau (1712–1778), contributed to the field through his book *Emilius and Sophia, or a New System of Education* (1763), by demonstrating how a student may be educated thoroughly by removing him from the detriments of society and placing him in a natural outdoor environment. Rousseau theorizes that an innate human morality and kindness may be achieved through this type of educational process, also heralding the ethical intentions of later educators, including Hahn.

Johann Henrich Pestalozzi (1746–1827) believed that a good mother is the best teacher of morality, but understood that not all children are born into good households. He therefore took on the mission of empowering orphaned children through an experiential educational process. His educational programs “involved field trips, group work, and ability grouping that allowed for the accommodation of individual differences of development” (Smith et al., 2012), p. 29). Pestalozzi believed that children should not be fed facts and data as if filling empty vessels; they should be guided to find answers by using their own powers of observation, analysis, and reason. His work lives on today as a groundbreaking approach to experiential education.

Maria Montessori (1870-1952) developed her theory of facilitating the educational process experientially through a study of special needs children (Swiderski, 2011). She noticed that by offering them ways to be constructive through working with their hands, they more easily progressed in their learning. She went on to theorize, and followed with practical success, that the entire educational process is one that must be richly engaging and experiential. In 1907, she applied her theory to more traditional students at the Casa dei Bambini "House of Children," on the outskirts of Rome (Swiderski, 2011). She was surprised at the success of her program, which

offered students the freedom to learn through multitudinous offerings of a wide array of disciplines, from math to caring for animals; from cooking meals to participating in social work in the community. She de-centered the teacher, placing the expectations, needs, and desires of her students as the central focus of the educative process – a reversal from the norms of the time period. Her classrooms were dynamic communities of students of varying ages, abilities, curiosities, and backgrounds; and she was able to keep them engaged through the process of allowing them to largely choose the activities, and hence the learning, of which they involved themselves. Montessori’s method lives on today in the form of the Montessori schools across the globe.

Sir Patrick Geddes (1854-1932) was a Scot biologist, geographer, and chemist, with ties to more than a dozen other fields, including education. His natural curiosity led him to master a variety of subjects, from lecturing in zoology at the University of Edinburgh, to sustainable town planning in India. He believed that through the “Hand, Head, and Heart” (Beames et al., 2012, p. 35) one could learn virtually any subject. He also believed that a connectivity to the natural world was the only way that the educational process would render positive results. Here is an excerpt from one of his many seminal works, *Cities in Evolution*, that demonstrates his belief that nature provides a valuable setting for the educational process:

Star wonder, stone and spark-wonder, life-wonder and folk-wonder: these are the stuff of astronomy and physics, of biology and the social sciences. Hence the fundamental place of Nature study, and of our Surveys. To appreciate sunset and sunrise, moon and stars, and the wonders of the winds, clouds and rain, the beauty of the woods and moon and fields—here are the beginning of the natural sciences. Set the child observing nature, not with labelled and codified lessons but with its own treasures and beauty feasts—as of

stones, minerals, crystals, of living fishes and butterflies, of wild flowers and seeds!

Above all, the cultivated plants and the kindly domesticated animals. We adults have all been more or less starved and stunted: in schools we were even made artificial defectives, for want of such observations; and with our intelligence un-awakened through nature's work and play. (Geddes, 1949, p. 216)

By that time, Geddes was one of the earliest theorists to directly place the earth's natural environments as one valuable to the educational process.

By time that Geddes was promoting educational theory that supports experience alongside an immersion in a natural setting, several other stars had also begun influential work in the field. Knapp and Smith's (2011) *Sourcebook of Experiential Education* details the work of many of these early figures in essays by various authors, including the works of experiential nature-study theorist and educator Anna Botsford Comstock (1854–1930); the progressive educator Alfred North Whitehead (1861-1947); the relationship theorist Martin Buber (1878-1965). Several other early educators are outlined in *Sourcebook of Experiential Education* that in some way have shaped and contributed to this study; and I encourage readers to explore the text in more detail for further investigation on early connections between experiential educational theory and nature.

The seeds of experiential education had been sprinkled by these early figures by the turn of the twentieth century; and prominent educators carried on the progressive work in various dimensions. Josephine Groves Holloway (1898-1988) founded the first African-American troop of the Girl Scouts of America in 1933. Having faced severe racism and sexism throughout her life, she maintained that teaching young African-American girls and women experientially through the context of natural settings resulted in the development of their strength and pride.

Rachel Carson (1907-1964), author of the seminal environmental activist polemic, *Silent Spring*, educated readers about the wonders of the natural world and encouraged experiential investigation through her authorship. Sylvia Ashton-Warner (1908–1984) served as a teacher in New Zealand who was tasked with educating Maori children who were not accustomed to the predominant British schooling practices of the time period. She designed inventive and artistic ways of providing instruction experientially; and her methods have been utilized in similar situations across the globe. There are too many practitioners, past and present, to investigate all of the works that are influential to this study. My goal is that the educators and the works that I have outlined serve as a framework for the project herein.

### **The Wilderness Setting as a Contrasting Environment**

In *Wilderness and the American Mind*, historian Roderick Nash argues that the transcendentalists, particularly Henry David Thoreau, spearheaded the ideology of the Romantic period which began to move Americans away from the conception of wilderness as demonic, evil, and perilous to a perspective in which wilderness was viewed as Eden-like, full of grandeur, and sublime (Nash & Miller, 2014). Prior to the development of these transcendentalist ideals, the wilderness was viewed as something to be conquered and controlled through utilitarian means; however, Thoreau and others began to paint the wilderness as something to be cherished, venerated, and conserved. Thoreau's work, discussed thoroughly in *Wilderness and the American Mind*, establishes nature and the wilderness concept as the backbone of Americanism.

Curriculum theorist David Orr provides contemporary contextualization with an educationist's twist of both Nash's work, first published in the mid-twentieth century, and Thoreau's, accomplished a century prior. In *Earth in Mind*, Orr (2004) argues that educational practice in Western civilization retains a regressive focus on defining success as the ability to

dominate the natural world. In this and *Ecological Literacy*, Orr (1992) called for a fundamental revolution in core educational practices that gives prominence to fostering a mutually respectful relationship between humans and the environment. Orr asked the following question of, and posed the following response to, educators:

What can educators do to foster real intelligence? ... We can attempt to teach the things that one might imagine the earth would teach us: silence, humility, holiness, connectedness, courtesy, beauty, celebration, giving, restoration, obligation, and wildness. (p. 12)

Orr lauds Nash (1992) and other scholars who have “cross-fertilized” their disciplines with ecology (p. 135) and makes liberal reference to another scholar, Dr. John Dewey, not so much for his promotion of ecological literacy, but for his work on how to effectively teach ecological values (Orr, 1992, 2004).

Indeed, as the transcendentalists were spreading the seeds of conservationism, the champion of another movement was born. John Dewey grew up a generation behind Thoreau, and, like most residents of New England in his day, likely knew of and considered the conservation efforts that were taking place across the country. He did understand the realities of livelihood at the turn of the 20<sup>th</sup> century, however, and as an author, addressed humans’ dominion over the natural world. In *Experience and Nature*, Dewey (1925) detailed how nature largely remained a utilitarian construct in the eyes of humans, writing, “man finds it natural that nature should support his activities” (p. 162). In Dewey’s day, nature, and hence the wilderness, was still that place that Nash described as requiring conquest, direction, and control. Dewey wrote, “the exacting conditions imposed by nature ... effect subjection of thought to a pertinent ordering of space and time” (p. 163). While one might conceive that the “things that the earth

would teach us,” as advocated by Orr, are best discovered by teaching within a very earthly environment, namely preserved wilderness, that particular utilitarian concept never drew Dewey’s pen. “Dewey remains the most heavily cited philosopher of experiential, adventure, and outdoor education, and discussions of the foundational philosophies of these educational movements often reach satisfactory ends with the works of Dewey” (Ingman, 2013, p. 24). His work therefore serves as a foundation to understanding the literature of outdoor education.

Kurt Hahn took the philosophy and the experiential model a step further towards the foundations of this study in his model of making real-life interactions with nature the grounding for two educative pathways. The first was to make the students mentally stronger through extremely challenging situations. The personnel of British merchant ships faced an interesting dilemma during the Battle of the Atlantic in World War II. Physically strong, young seamen, when faced with dire circumstances, were dying; but when faced with the same circumstances, less physically fit, but older seamen, would survive. This did not make sense; so, Hahn was brought on to develop a training for young seamen that would train them in fortitude. The program, initially dubbed the Sea School, eventually became to be called Outward Bound, the phrase that ships used when departing dock for voyages to sea. The training involved extremely strenuous and challenging circumstances at sea, often performed at the hands of the open ocean in mere life-rafts. The training was greatly successful in its first aim – training young students to remain diligent and strong when faced with extremely dire physical circumstances – so much that participants from “all walks of life,” not just seamen, signed on for the harsh educational experience (Veevers & Allison, 2011, p. 56). This concept of triumphing over adversity is something Hahn returns to time and time again in all of his educational endeavors (Hahn, as cited in Veevers & Allison, 2011, p. 69).



Hahn's (1960) other mission was to create educational experiences that led to a higher sense of morality and ethics: "there is no doubt: too many boys and girls climb the educational ladder, purchasing knowledge at the price of power" (p. 6). Throughout his courses, students had to demonstrate active citizenship and to be helpful members of the community (Hahn, 1957). His goal was not to simply make students resilient and mentally strong for themselves, but to come out of their courses with a better sense of community and care. In a speech entitled "The Aristocracy of Service," Hahn comments that it is his "life mission" to provide "incentives" to his students, "to move, incentives to face conditions of adversity, incentives to pause and look back and look ahead, incentives to exercise sensible self-denial, incentives to pay careful attention to detail, incentives to help your fellow men" (Hahn, 1967, p. 291). This attention to the development of ethics as a product of the educational experience shines through in the Outward Bound School's curriculum design to this day. "Outward Bound, with its ambitious objectives of virtue development and service, and its unique methods of challenge and adventure toward these ends," wrote Benjamin Ingman, "changed the standard for what outdoor education would resemble in America for the next several decades" (Ingman, 2013, p. 29).

Victor Walsh and Gerald Golins' (1976) detailed the curriculum of Outward Bound in their Outward Bound Process Model. Most words that relate to OB reference, in one way or another, that particular work as being the essential source for acquiring a grounding in contemporary Outward Bound curricular theory (Bacon, 1987; Drebing, 1986; Ingman, 2013; James, 1980a; Miles & Watters, 1984; Udall, 1986). Walsh and Golins (1976) did not explicitly develop *The Explanation of the Outward Bound Process* as a curriculum model. Rather, it is as if they merely transcribed on paper what OB instructors were already practicing at Outward Bound schools around the world and codified it for OB posterity. The curricular theory that Walsh and

Golins simply termed “The Outward Bound Process” arose sometime between Kurt Hahn’s training of intrepid British sailors and the practices that materialized in Outward Bound courses across the globe 35 years later (Walsh & Golins, 1976).

In The Outward Bound Process Model, the authors explain that the prescribed physical environment necessary to an Outward Bound experience is not specifically the wilderness environment that provides transformational learning opportunities; it is, as Walsh and Golins (1976) phrase it, the contrasting environment. In an environment that is contrasting, or different from one in which the learner is used to, nuances which tend to be overlooked by human beings in a familiar environment become stimulating forces. The learner may also gain fresh perspective on the old, familiar environment from which she comes. The learner’s entry into a contrasting environment is the first step towards reorganizing the meaning and direction of her experience. (Walsh & Golins, 1976, p. 4) Everyone learns differently, but everyone may learn well in an environment with which they are unfamiliar. Walsh and Golins concede that while “any contrasting environment will suffice [in providing a valuable venue for experiential learning] ... the outdoors are especially potent in this regard” (p. 4). The participants in this study were immersed in an outdoor environment as the contrasting environment. The following section highlights the various ways that students’ wilderness experiences have been researched and reported upon prior to this study.

### **The Student Experience in Studies of Outdoor-Based Programs**

In a review of research on outdoor adventure, Barrett and Greenaway (1995) wrote that participants’ accounts of their experiences were “almost entirely absent from the research reviewed” (p. 54). A quick perusal of some of the most notable authors and studies in the field from the eras prior to 1995 proves to be in general accord with their allegation (see Bacon,

1983; Ewert, 1977, 1983, 1989; Hopkins & Putnam, 1993; Kaplan & Talbot, 1983; Mortlock, 1978, 1984; Priest, 1990, 1991; Quinn, 1990). When Nichols (2000) authored “A Research Agenda for Adventure Education” five years later, he called for an “alternative research paradigm” in the field, which included “the use of a broader range of research methods, including participants' accounts of their experiences” (p. 22). In one of the most oft-cited and influential studies of the time period (indeed, in the history of the discipline), Hattie et al. (1997) studied participants’ “out-of-class experiences,” but still did not include accounts of direct student experiences as a part of their data or findings. Right around this time, however, the studies that were conducted began to change in that they highlighted real student experience as an antecedent to underscore findings. The following studies illustrate student experience through participants’ own perceptions of their outdoor-based programs. These have all have been published since the time that Barrett and Greenaway authored their sentiment that student experience was “almost entirely absent.” In this section, I investigate ways in which the student experience in outdoor adventure literature has been researched and reported upon that are most relevant to this study.

The shift in the research practices after Barrett and Greenaway’s (1995) observations, whereby researchers began more widely utilizing participants’ accounts of their experiences as part of the data collection process, introduced an additional level of descriptive inquiry to the research studies that were published. The following investigation of the leading studies of that genre also includes likewise relevant studies that included photo-elicitation as a data collection tool, as those studies are particularly related to this study.

In a study of teens involved in an Alberta-based, 12-day outdoor adventure program, Haluza-DeLay (1999) sought to gain insights into the participants’ experiences and how those

might lead to their connectedness to, and feelings of responsibility for, the natural world at large. Comparable to my own presumptions on the matter, the author thought that, “program instructors assume that something is happening inside participants regarding the environment while on a wilderness trip,” and followed this sentiment with analogous questions to my research questions in this study. “What is it?” he queried, “And how is it happening?” (p. 130). The author looked to the participants to specifically discover, “the developing relationship of the participants with the natural world during a wilderness trip” (p. 130). He made observations of the students as a mostly observer on the trip, and also conducted two interviews with each of the students at two weeks and four-to-six months after the program. Rich with quotations from the participants, his findings were mixed on their perceptions of the wilderness landscape in which they were immersed. On one hand, he found that the program, and to some extent, the instructors focused the participants on team culture, which influenced them to form bonds that put the group somewhat in contention with the natural setting. One of the students that he interviewed [Mackenzie] expressed that her connectedness to the group insulated her from the setting, recalling that when she did get away from the team she looked around and had the feeling that, “you just totally forget when there's all that beauty surrounding you” (p. 134). On the other hand, there were enough of those moments that Mackenzie described during the trip that the participants did express a generalized development towards a connectedness with nature, “but,” he theorized, “there also seems to be a purposeful, although mostly unrecognized, movement toward something more fundamental” (p. 136). This work placed the participant experience in connection with the natural setting at the forefront of the interpretive lens of the study of outdoor adventure, a practice that was just coming about during the era of its publication.

In another study of involving immersive wilderness-based trips in western Canada, McKenzie and Simon Fraser University (2003) interviewed, observed, and/or surveyed 92 participants with the goal of outlining the benefits of Outward Bound programming through a portrayal of their experiences. The author's methodology was case study, and like the methodology of educational criticism used within my study, she endeavored to, "to provide some measure of 'thick description,'" continuing that the work is supported, "by including a sampling of students' comments" (McKenzie & Simon Fraser University, 2003, p. 12). In the article, she details her reasoning for including "thick" description (pp. 10-12). While it is not an educational criticism, the explanatory nature of her descriptive case study is laid out much like one, and the student experience shone through in her findings. True to the author's claim, the student comments that were included within the analysis lent a level of sincerity to the study that stands out among studies prior to this era. Her findings were comprehensive in detailing the students' Outward Bound experiences, and led her to a call for a rethinking and a renewal of Walsh and Golins' (1976) "Outward Bound Process Model," discussed in a previous section of this study.

Loeffler (2004) authored a study of student experience in the outdoor setting in what may have been the most influential piece of literature to the data collection process in this study. Her study included 14 participants in a college-based outdoor education program, and she utilized photo-elicitation to gather data about their experiences. While many disciplines have incorporated photo-elicitation as a means of data collection for research projects for several decades (I have detailed the use of this tool in Chapter III), Loeffler was the first to utilize it in studies of student experience in wilderness settings. "As far as the researcher was able to discern," she wrote, "this was the first study of outdoor experience to utilize photo-elicitation during data collection" (Loeffler, 2004, p. 553). She interviewed students who had participated

in backpacking, rock climbing, whitewater and sea kayaking expeditions ranging from one weekend to three weeks. The students' own pictures were used to elicit responses about their experiences during the college courses. Her primary findings were that the participants felt "spiritual connection with the outdoors, connections with others through outdoor experience, self-discovery, and gaining perspectives through outdoor experience" (p. 536). These findings remain consistent within studies of student experience in outdoor studies, which the author likewise conceded, although she "recommended that photo elicitation receive further use in investigations of outdoor experiences" (p. 554). That recommendation, on top of the overriding aspiration to detail student experience in the wilderness, at least partially led to the data collection process in this study.

In another study that utilized photo-elicitation as a data collection tool, Smith et al. (2012) studied the experiences of 34 secondary school students in New Zealand who attended a school-based outdoor education program. Like Loeffler's (2004) study, this one entered into new territory. "Although using images in research in this way is not new," they wrote, "the photo-elicitation interview technique has not, to our knowledge, been used previously in an outdoor education context involving adolescents" (p. 367). More so than seeking traditional findings from the programming at hand, the authors looked to evaluate the experience of the participants in light of the photo-elicitation model. They, like Loeffler, found that the method worked well for the purpose of illuminating the participants' experience, and recommended that future studies consider this as a primary data collection tool.

In a set of studies that were quite influential to the work of this researcher, Leberman and Martin (2004; Martin & Leberman, 2005) studied the experiences of students on two fronts. They cited a previous study from their university (Massey University; cited study not available)

that demonstrated that students' "initial reflections at the end of the course generally went no deeper than students 'noticing,' or 'making sense,'" of their outdoor course experiences.

Leberman and Martin (2004) designed a study that "analyses the use of a structured post-course reflection activity to enhance the transfer of learning" (p. 173). Twenty students were asked a series of questions at various time intervals post-outdoor course in order to make findings about the development of the depth of their learning. The questions were qualitative, and open ended, consisting of the following, "What did you learn most from? Why? What moved you out of your comfort zone? Why? What was the most enjoyable part of the programme? What was the least enjoyable part of the programme? What impact do you think the programme has had on you personally and professionally? Why?" (p. 177). Their findings led them to conclude that, "If adventure based experiential education claims to change people and be a means of facilitating the transfer of learning, then reflection is a key element in the process" (p. 182). This set the stage for a future study, where they sought to determine if this data was more compelling than more traditionally-utilized quantitative methods. Martin and Leberman's (2005) project looked to more deeply investigate students' experience through a mixed-methods approach. This study included 157 participants on four different Outward Bound New Zealand courses. As with their 2004 study, they utilized post-course, open-ended questioning at three prescribed time intervals as a data collection tool. They also, however, included a "psychometric instrument consisting of 29 questions, and examines the effects of programs on participants' "life effectiveness," as defined by the nine factors. Each question is rated on an 8-point scale, with 1 being "False—not like me," and 8 being "True—like me"" (Martin & Leberman, 2005, p. 47). Their data analysis led them to the conclusion that while both methods led to constructive findings, the qualitative data was more telling. "In order to gain a true insight into what experiential learning experiences

mean to individuals,” they concluded, “there is a need to move away from trying to justify prescribed educational outcomes only in terms of numbers.” They called for future research studies to, “move toward trying to encapsulate the meaning of these experiences to individuals by valuing the words they attribute to their learning” (p. 57). Works like Leberman and Martin’s were paving new ways of investigation for researchers’ insights into student experience in outdoor adventure settings in the early 2000s.

Studies that prioritize an understanding of the student experience makes sense; Dewey (1997) maintained that “everything depends upon the quality of the experience which is had” (p. 27). Why then should research which aims to improve student experience not investigate direct student experience? Ingman and Moroye-McConnell (2019) reminded educators of an “important point,” that being, “A focus on the experience of students is of primary importance in consideration of their education” (pp. 348-349). Indeed, both of these authors have contributed a wealth of research pertinent to student experience, and much of Ingman’s has centered specifically around adventure education. Calling himself, “a connoisseur of adventure; an experienced adventurer and a member of the cultural in-group,” Ingman (2013) has utilized the methodology of educational criticism and connoisseurship in several studies of outdoor adventure, and has also highlighted student experience as a central focus of his work (p. 75). In Ingman’s dissertation, he devoted a considerable portion of his study design (pp. 71-76), detailing his particular commitment to emphasizing student experience through what he termed as, “an experience-focused brand of educational criticism” (p. 71). Ingman (2018) later published a study tangential to the dissertation in the *Journal of Adventure Education and Outdoor Learning* as an article. Within the article, he frames the participants’ time spent in the field as “aesthetic experience” (Ingman, 2018, pp. 323-337). “This conception of AE experience, he



illuminated “is characterized through sensory encounters, full attention and aesthetic paradox” (p. 323). Ascribing meaning to 41 students’ experiences through the lens of educational criticism, Ingman squarely focused the participants’ time in the outdoor setting as the pre-eminent focus of the work. In an earlier article that was published in the same journal, Ingman (2017) followed the experiences of one intrepid outdoor adventurer in order to explore the meaning of adventure. Terming the type of encounters that the adventurer had while immersed in the adventure and outdoor setting as “bigger experiences,” Ingman found that, “The meanings ascribed to adventure will continue to transpire idiosyncratically, and the corresponding educational value of these experiences will be personalized in accordance” (p. 348). At the time of the publication of this dissertation, Ingman (2018) was still committed to fulfilling his own call for more work needing “to be done to articulate the forms and functions of aesthetic experiences in AE” (p. 335).

Several other studies have explored students’ experiences in various ways. In a study with some similarities as this dissertation, Asfeldt and Hvenegaard (2014) studied the “perceptions of learning, critical elements, and lasting impacts” that participants took away from their wilderness expeditions in credit-based college courses (p. 132). While their methodology was not as personalized as those like Ingman’s, or this study’s, questionnaires and surveys yielded findings in Asfeldt and Hvenegaard’s work that illuminated features of the wilderness experience that the authors sought to uncover: “wilderness experiences provide a foundation for enhancing and deepening learning [of the participants] for many years after the expedition” (p. 149).

Another study with similarities to this dissertation is Orams (2015) study of adolescents on wilderness expeditions through New Zealand’s sub-Antarctic Auckland Islands. The author

utilized photo-elicitation as the primary tool to conduct the data collection process. Orams cited that he chose photo-elicitation “to provide insights into the most important experiences of these young people” (p. 446). The participants were asked to choose their two favorite photographs from the expedition, and they were offered the opportunity to choose any two photos from anyone, not just their own. The author offered them and collected from each of them a very simple questionnaire to accompany their submissions (what is the picture, and why did you choose it), but did not conduct interviews with the participants. He then thematically arranged the pictures, in search of similarities. Five predominant themes emerged from the data, “experiential learning; uniqueness of the setting; uniqueness of the experience; sharing with others; adventure; and sense of accomplishment,” which the author found to be “consistent with previous research on the experiences of adolescent participants in other wilderness-based outdoor education programmes” (p. 446). Orams’ project certainly influenced the design of this dissertation. I adopted parts of his experiential strategy, and also thought of Ingman’s (2013) words as I designed the study. “If we are unwilling to adopt experiential modes of inquiry into a topic,” the author asserted, “then we limit our understanding of the experience, and this perspective [of students’ experience] may remain concealed” (Ingman, 2013, pp. 74-75). Ingman went on to further influence this study in stating that, “If each mode of inquiry is partial, we may well arrive at a more robust portrayal of the topic through embodying a diverse methodological arsenal” (p. 75). As we narrow in on the studies that support this dissertation, we also see that a study of this exact model has been called for in many ways, but has not exactly been yet conducted.

### **Summary and Preview of Chapter III**

In this chapter, I reviewed much of the data relevant to this study and narrowed studies of experiential learning down to a niche in which this study rests. There are no studies that represent the student experience in the desert canyons of the Colorado Plateau—an environment where thousands of students travel every year. There are few studies that utilize visual representation, in the form of students' photographs, as data. There are few studies that utilize students' perceptions, as relayed through their own pictures and words, to evaluate the student experience. This study attempts to fill those voids. In the following chapter, I detail the methodology and the processes therein that I used to conduct this study.

CHAPTER III  
METHODOLOGY: EDUCATIONAL CONNOISSEURSHIP  
AND CRITICISM

**Introduction**

The purpose of this study was to study college students' perceptions of the desert canyons of the Colorado Plateau. Elliot Eisner (1933-2014) served as Professor of Art and Education at Stanford University from 1965 through his passing in 2014. He championed throughout his career that the arts are beneficial not as an addendum to math and science curriculum, but for the sake of the arts themselves (Eisner, 2002a). It was upon this laurel that he developed the qualitative research methodology of educational connoisseurship and criticism. Also called educational criticism, this methodology calls for the researcher to describe what she sees in her work in a way that, like an art critic, paints a picture of the educational experience to the reader that allows them to feel immersed in the situations in a creative way that promotes deep understanding.

The research paradigm of educational connoisseurship and criticism is applicable to the research questions in this study, as I have investigated and reported upon the structural, curricular, pedagogical aspects, evaluative, and intentional components of eight college students' (the participants) educational experiences in the setting of four individual desert canyons of the Colorado Plateau. Eisner (1998) pointed that these five dimensions of an educational experience encompass the experience in a way that are inseparable. Each dimension, if slightly altered, affects the other four. I have investigated the desert canyon immersion-based experiences of the

eight participants of this study, contextualized through these five dimensions. I have attempted to artfully describe the experience of being in those canyons; as that environment elicits a visceral response in me. I hope the descriptions of the students' experiences, detailed in Chapter IV, may elicit that response in the reader, as well, so as to gain an understanding of the perceptions, and hence the educational experiences that took place, within the desert canyons. Eisner (2002b) also identified description, interpretation, evaluation, and thematics as the dimensions through which to report upon the experience of students within the realms of the experience. These can be reported through educational criticism. Through my own experience as a practitioner and connoisseur of desert canyon-based educational experiences, I have then described, interpreted, evaluated, and thematized the students' experiences in an attempt to provide a comprehensive depiction of those experiences. "The aim of criticism," wrote John Dewey (1934), "is the re-education of the perception of the work of art" (p. 324). If we consider educational experiences as works of art crafted by the instructors at hand, then we may apprehend the intent of my study through Dewey's discourse. This philosophy lends itself perfectly to creating, through my interpretation, an overall sense of the perceptions of the students in this study. Eisner (1991) did not aspire that an educational researcher offer an unbiased narrative of an educational experience, but rather, through the experiences and insights – the connoisseurship – of said researcher, to enlighten the purveyor of the research to an artful and experiential picture of the experience. This, in turn, offers the reader to gain a wholesome and comprehensive understanding of the segment of the experience that the researcher intends for the reader to understand. This study aims to present a rich, deep, and nuanced insight into wilderness-based educational experiences and to reorganize the readers' perceptions of those experiences. Utilizing educational connoisseurship and, subsequently, criticism, I offer a look into the participants'

educational experiences and offer my readers the opportunity to “see” through the lens of what Eisner (1992) called “an enlightened eye” (p. 618). My aim is, through the application of my connoisseurship in educational pursuits that are conducted within the desert canyons of the Colorado Plateau, structured through the methodology of educational criticism, that this study portrays the value of such a venue to the array of venues that exist in the discipline of education.

### **Description and Interpretation**

This study lent itself well to educational criticism. The canyon environment is an unconventional classroom; and in many ways serves as the teacher and the classroom. On the thousands of days that I have spent with students in such places, I can admit that there is not one moment that I am doing anything other than facilitating an experience. I can say this about my History course, as well. I facilitate an experience. But there is a difference; and the difference is in the rich, wild, sensory-stimulating environment in which we are immersed, and for the record in which we are not ever entirely safe. There is an inherent physical danger to navigating a wilderness environment; and the stories that come out of any version of those experiences cannot go understated. Usually, those experiences are left to the realm of oral story-telling. Magazines, books, and documentaries reveal the narratives of the most daring adventures in the world, but rarely do we happen upon narratives of backcountry experiences in the academic setting; and it is even more rare for the stories of students who have encounters within the wilderness to have their stories heard. “Connoisseurship,” wrote Boughton et al. (1996), “is the art of appreciation. It need not have a public expression. It is criticism that gives connoisseurship its public face” (p. 82). I plan to serve as the connoisseur in this study, but will utilize criticism to make an expression of that connoisseurship in the form of a narrative for others to experience. Uhrmacher et al. (2017) pointed out that “interpretation overlaps with description” (p. 37). In this study, I

described the students' experiences within the desert canyons through the data. My hope is that the photographs offered by the students, coupled with a connoisseur's scrutinous interpretation of those photos, the interviews, and passive observation, may begin to provide some responses to the posed research questions herein.

### **Evaluation and Thematics**

Uhrmacher et al. (2017) termed the "emergent foci" as unanticipated aspects about the experiences of the research participants that come about during the middle or end of the data analysis. The emergent foci came brilliantly to light in this study as I contemplated the eight participants' Day 2 photographs. Those eight photographs were all submitted to me independently, and yet all eight photographs were taken within a few hundred yard span of a canyon called Medieval Chamber/Morning Glory Arch. I explicate this in great detail in Chapter IV; but the point here being that I have come to understand that there is no end to the surprises that come from people's interactions with backcountry settings. This, coupled with, as Uhrmacher et al. (2017) distinguish, the "well-documented unpredictable nature of..." all educational settings, positions this study well in terms of the evaluative lens (p.50).

Through this study, I sought to come to understand a deeper level of value of the backcountry as an educational venue. The project yielded results of much greater import than just that notion, however. This study demonstrates some of the inherent value in educational practices, such as offering students the freedom to develop perceptions of their educational experiences through and with the accordance of the intentions that they bring to the educational experience with them, and allowing their individual perceptions to serve as their own knowledge. Additionally, while I came into this study with the intent of highlighting the backcountry environment, the project demonstrated that it may be the contrasting environment that is more in

alignment with providing a valuable venue for all diversities of students. In accordance with bouncing the thematic lens of the methodology off of the research questions, I believe that this study reasonably demonstrates 1) how the students “perceive” their experiences; 2) some beliefs, values, and commitments that are fostered in response to these experiences, and 3) insights into what these students' experiences inform us about wilderness immersion as a component of educational programming.

Eisner (2002b) noted two types of generalizations that educational criticisms elicit; and I will call this one of mine, the more “refined process of perception” (p. 242), the first type. The second type that Eisner references, described by Uhrmacher et al. (2017) as a curation of the researchers “repertoire of anticipatory images” (Eisner, 2002b, p. 242) “and shares them with others by allowing us to appreciate the uniqueness of a situation along with its significance for others (Uhrmacher et al., 2017, p. 55). This “anticipatory framework” (p. 55) backs the work of research by making it valuable to the discipline of education. I opened my lens to allow for themes to emerge from this research that respond to the research questions. All of these insights, and others that contribute to the evaluative and thematic lens, will all be detailed in Chapters IV and V.

### **Study Design**

The design of this project focused on three specific influences. First, I was interested in investigating college students' experiences. Per the methodological presumptions of educational criticism, I sought to identify research participants in a particular school environment and in a discipline with which I feel most comfortable. I gained the permission from the community college that I work for to conduct this project (see Appendix A). My hope was that I would



garner the participation of as diverse a group of students as possible. I will explain more about this process in the following section, and conclusions upon this matter in Chapter V.

The second step in the design of this project I wanted to depict those students' experiences in what I have termed the "backcountry, austere, difficult-to-access, natural, remote, wilderness: environment, place, setting." Up until the time of the data collection, I was not entirely set on the specific setting, just so that it met the parameters of an outdoor education course at a community college. The timing of the data collection coincided with a technical canyoneering course that I was scheduled to teach in the fall semester; and because the venue of the desert canyons of the Colorado Plateau is both one in which I am intimately familiar, and also fits the standard of the "type" of venue that I wanted to conduct the data collection within, the desert canyons it became.

### **Data Collection**

The data collection for this study process consists of photo-elicitation, semi-structured interviews, and passive observation. I have detailed each component of the data collection process in the following three sections.

#### **Participant Observation**

Glesne (2016) wrote that participant observation ranges "...across a continuum from mostly observation to mostly participation (p. 65). She posits that the researcher should consider the context of the study and his or her own philosophical perspectives, but that the most important part is "less a case of what is established as right than of what your judgment tells you is fitting" (p. 66). In this study, I operated on the "mostly participation" end of this continuum. My role as an instructor and also as the trip leader of the course mandated that I be fully dedicated to the safety, the health, and to the instruction of the students in the course. My

observations had much less to do with this project than with conscientiously facilitating a safe and engaging environment for the students on the course. I did not take notes other than those I scripted at the end of the evenings; and those were focused on the course at hand. I designed this project so that I could have relied solely on the photo-elicitation and the interviews, even if I were not with a course that was studied. Upon my completion of the data collection and drafting the descriptions of the data for Chapter IV, however, I felt glad that I had been on the course, however. I felt that I had a deeper understanding of the overall vibe and perspective of the course; and revisiting those canyons with the research participants definitely contextualized their experience for me. I recalled some specific instances from the course that I reference in the descriptions, as well as referencing the manners of participation from the participants and the group atmosphere. The data descriptions otherwise consist overwhelmingly of the participants' photos and the interviews.

### **Photo Elicitation**

After the participants in this study consented to taking part in the project (see Appendix B: Consent Form), I introduced them to the data collection tool of photo elicitation. I asked them to take several photographs during each day of the technical canyoneering course. After the course ended, each of them identified one picture from each day of the course that they were most strongly drawn to in terms of connecting with their perception of their experience on that day. I asked them to label the pictures according to the day of the wilderness immersion on which it was taken (Day 1, Day 2, Day 3, and Day 4) for a total of four days. I then asked them to send the photos to me via email. Each participant was also asked to fill out a brief questionnaire (see Appendix C). All eight participants complied with this component of the data collection process.

## **Semi-Structured Interviews**

I drafted interview questions that are guided specifically by the research questions (see Appendix D: Interview Questions). I attempted to gain detailed insight into the students' perceptions of their course experiences. The photographs that they chose to submit to me were utilized during the interview as pathways to assist the students in diving deeper into their perceptions of their excursions. I also utilized the pictures as springboards into an investigation of the beliefs, values, and commitments that were fostered as a product of the course experience. I also solicited the students' thoughts on wilderness immersion as a component of educational programming. All of the interviews were recorded and transcribed using Otter.ai, and seven of the interviews were recorded via Zoom.

I wanted visual representations to encompass a large part of the data for four reasons, which are detailed in the next paragraph. I considered drawings, photographs, and video, any/all of them either by the participants or myself. I settled on the process of photo-elicitation as a primary data collection strategy. Photo-elicitation is utilized as a research medium in many disciplines, most prominently in medicine, nursing, and healthcare (see: Hajradinovic et al., 2018; Padgett et al., 2013; Webster, 2017); education (see Boucher, 2017; Dunne et al., 2017; Richard & Lahman, 2015); and in the social sciences (see Ibanez, 2004; Samuels, 2004; Walker, 2014); and a range of other disciplines ranging from technology, to business, to earth sciences. The inspiration for the use of photo-elicitation as a data collection tool in this study came primarily from three articles. Orams' (2015) study used photo-elicitation to study adolescents' experiences during an expedition to New Zealand's sub-Antarctic region. Smith et al. (2012) studied the use of photo-elicitation in its effectiveness as an evaluation method for outdoor education programs. Of all of these, most significant to this study was Loeffler's (2004) article,

which studied the experiences of 14 participants who were enrolled in an outdoor education program. Harper's (2002) "Talking About Pictures: A Case for Photo-Elicitation" and Bignante's (2010) "The Use of Photo-Elicitation in Field Research" both offer synopsis and further insight into the use of photo-elicitation in qualitative research.

The first reason that I wanted to utilize visual medium in this study is because of a study that I piloted during my doctorate program that involved photo-elicitation yielded good results; I refined the data-collection process for this study based on what I learned from that project. Secondly, understanding the stress that many college-age students express, I did not want to add any undue anxiety into their lives; therefore, I took measures to make participation in the study enjoyable for the participants. I asked the research participants to simply submit one picture from each day of their course to me, and then later to reminisce over the photos during an interview was by design meant to entail an enjoyable exertion for them. Bignante (2010) noted that participants in her study

demonstrated greater involvement in the activity than in the first phase based on a conventional interview. On the one hand, they felt they were playing a more active role. On the other, they enjoyed the activity and, as often happens, this proved to be much more effective in breaking down relational and communication barriers than sound commitment and even the best intentions. Having enjoyed taking the photos, they then wanted to explain the reason for their choice, to see the images projected on the screen of our laptops, to comment on the pictures. (p. 17)

Indeed, many, if not all, of the participants in this study expressed that they enjoyed contributing to the project. The third part that led me to the data collection stratagem of photo-elicitation was that I aspired for the reader of this study to have some visual connectedness to the

environment in which we were immersed. My hope is that readers of this project are drawn to the pictures that the students took and submitted, and that through the readers' exploration of those photos, that a connectedness also to the individual students' experiences will be achieved.

Fourth, as a researcher, pictures are emotionally stimulating to me. The tangibility of the photographs not only drew the students back to their perceptions of the environment and the course; I too drifted back pensively back to the environment, and to courses within the desert canyons that I have instructed going back more than two decades. That turned out to be a greater force that I could have even foretold in inspiring my connoisseurship and subsequent descriptive voice.

### **Participant Selection, Rationale, and Positionality**

As I now work primarily as a college professor (specifically at a college, and not at a university or at an adventure education organization like Outward Bound or National Outdoor Leadership School, although I do feel that these are all valuable research areas), I feel most suited to exercise connoisseurship in conjunction with college students as the participants. In addition to my personal connection with college students, the college environment also has direct connections to formal accreditation processes, guided by educational policy and planning. The third research question investigates how these students' experiences inform us about wilderness immersion as a component of educational programming; and while adventure education programs are educational, they are not bound by the constraints of local, state, and federal accreditation processes. The third quality of my research participants is that they participate in an Outdoor Education (OE) course, where OE is interchangeable with Outdoor Leadership (OL), Outdoor Recreation (OR), Recreation (REC), Adventure Education (AE), or any combination of Adventure, Recreation, Outdoor, and Leadership courses in the college setting; I choose OE over

other disciplines such as Wilderness Medicine, Hospitality, History, and other disciplines in which wilderness-based experiences occur. As the data collection phase of this project approached, I was slated to facilitate the technical canyoneering course described herein; and so the venue was set if I could garner the participation of students within the course.

Eight students registered for the course. That was the course enrollment cap, as Arches National Park regulations stipulated that no more than 10 travelers journey into the technical canyons of the park. So with two instructors, the student number was set at eight. During the first meeting of the course outside of the field setting, I explained this research project to the students, and offered them a recruitment letter (see Appendix E). If they were interested in assisting the project with their participation, I then offered them the Consent Form (see Appendix B). All eight of the students consented to join the project as participants. In order to lend credibility to the study, I planned to, in the words of Uhrmacher et al. (2017), “include a diverse array of participants by considering culture, gender, class, age, educational background, and other factors” (p. 28). I would include religious preference and sexual orientation to that list. Being a dissertation, this study was constrained by timelines which narrowed my choice of courses from which to conduct the data collection. It was fortunate that a course from the institution of which I had garnered approval to conduct a study within ran with a sufficient number of participants to lend substantiality to my study, and also in the semester in which I planned to conduct the data collection. It was also fortunate that there was a somewhat reasonable mix of culture, gender, age, educational background, religious preference, and sexual orientation among the group, especially considering that the participant pool consisted of eight. As Gress and Hall (2017) noted, however, “Outdoor experiential education (OEE) programs often cater to white, upper-class individuals” (p. 114). While I can make no assumptions, and did not ask the participants in

this study to reveal anything about their class status, it may be noted that they all identified as white. Due to that fact, there is a limitation of the study that I detail in Chapter V. I negotiated my positionality to the research participants, as the researcher and at the same time as one of the instructors of the technical canyoneering course, by entering into this project with an open mindset and a genuine desire to interact collaboratively (Glesne, 2016).

### **The Desert Canyons of the Colorado Plateau**

Edward Abbey's iconic 1968 novel, *Desert Solitaire*, begins "This is the most beautiful place on earth... There are many such places. Every man, every woman, carries in heart and mind the image of the ideal place, the right place, the one true home, known or unknown, actual or visionary" (p. 1). Abbey goes on to list many places that could be conceived of as holding such an appellation, and then digresses, beginning the second paragraph with "For myself I'll take Moab, Utah. I don't mean the town itself, of course, but the country which surrounds it—the canyonlands. The slickrock desert. The red dust and the burnt cliffs and the lonely sky—all that which lies beyond the end of the roads" (p. 1). Abbey served two summers as a solitary park ranger, living within borders of Arches National Park; his time spent there inspired *Desert Solitaire* (National Park Service, n.d.-b). The setting of Abbey's affections is where this study took place.

As the place is a seminal element of this project, I offer a brief written description of the desert canyons of the Colorado Plateau (CP). The CP encompasses 150,580 sq. miles in the Four Corners region of the United States, surrounding the location where the borders of the states of Colorado, Utah, Arizona, and New Mexico all converge on a single point. The National Park Service (n.d.-a) describes the CP as "a series of tablelands (plateaus or mesas) located within an immense basin surrounded by highlands. Stream valleys that are typically narrow and widely

spaced dissect the region, as do larger valleys...” (National Park Service, n.d.-a). There are six physiographic sections of the CP, each geographically defined by geological features. The section in which the course in this study took place was in the Canyon Lands section, an arid region located primarily in southeastern Utah, but also spanning into southwestern Colorado and northeastern Arizona. The section is fairly desolate, and is known for its stunning sandstone formations, including canyons ranging in size from minute to Cataract Canyon of the Colorado River. It was within some of the highest navigable canyons in terms of elevation within the Canyon Lands physiographic section of the Colorado Plateau that this course took place. I will allow the students’ photos and oral descriptions of their experiences in the setting in which they were immersed to serve as the remaining, and foundational, portrayal of the desert canyons of the Colorado Plateau in which they were immersed.

### **Data Analysis**

In this section, I will explain my data analysis process. I first introduce how I holistically set about analyzing the data in accordance with the methodology of educational connoisseurship and criticism. This holistic explanation of my analysis grounded me in the overall structure of this study. I have endeavored to make it clear to the reader that this study is a qualitative, systematic inquiry, guided by my individual descriptions, interpretations, and evaluations of the data. The processes that I describe in this section made the raw data accessible to demonstrating patterns, and then annotations that are detailed in Chapters IV and V. The following subsection, “Data Analysis Through Prose,” offers a detailed explanation of the specific steps that I used to analyze the data. I could not find a duplication of this process in any literature that I searched including Miles et al. (2014), Creswell (2013), Bloomberg and Volpe (2008), Silverman (2013), Glesne (2016), and Uhrmacher et al. (2017), so I offer a narrative of my process there.



### **The Holistic Analysis Through Educational Criticism and Connoisseurship**

As I used Eisner's (1998) methodology of educational criticism to guide this project, I also utilized educational criticism and connoisseurship structure to conduct the holistic process of data analysis. I employed creative description to offer the reader insight into the desert canyon environment in which the participants were immersed, while at the same time providing insights to their perceptions. The photographs that they submitted are included in this study to add richness to the descriptive aspect of the data analysis. The interpretive aspect of data analysis moves from the "what" that was described in the descriptive segment of analysis to the "why or how" (Eisner, 1998 p. 98) elements of analysis.

In Chapter IV, I offer the reader an interpretation of the students' perceptions. The descriptive and interpretive analysis makes attempt at addressing students' perceptions of their course experiences, and also to interpreting their beliefs, values, and commitments fostered during their immersions. The evaluative lens of analysis likewise addresses this second question, and moves to the third research question about the value of the immersion as a part of educational programming. Through an analysis of the data, I have attempted to construct an evaluation in Chapter V that informs educational practice. The thematic lens of the data analysis makes attempt at drawing out common themes between all eight students' submitted data, and their perceptions. I have summarized the entirety of the data alongside the descriptive evaluations in order to draw out themes that may make reasonable assumptions across the scope of the research questions.

## **Data Analysis Through the Process of Prose**

Bloomberg and Volpe (2008) explain how many dissertation-level researchers have difficulty settling upon an approach to analyzing their data (pp. 188-189). This was certainly the case for me. I studied and dabbled with several approaches. As I had a preconceived theory about students' perceptions of the desert canyon environment, I experimented with looking at the data through a deductive approach. This failed, because the participants' actions, photos, and interviews revealed much deeper connections and perceptions of the environment than an overarching theory accounted for. I tried some inductive strategies, including making tables that arranged the data thematically, and by attempting to code the mass of data; but the process felt shallow, and again, did not seem to allow for the full, rich perspectives of the individual participants to be illuminated. I even considered an abductive approach, but felt that the participants' perceptions were not being described to make sense of anything; rather, they stand on their own as perceptions to which those students ascribe value and meaning. So, I finally just went back to an old method of analysis that has served me time and again – I just started writing, and hoped that through the process of describing the data in prose would lead me on a more discernible analytic path.

I thought that one thing that I could do for sure, and that would be enjoyable even if it didn't make it into the final dissertation, would be to utilize my connoisseurship to describe the incidents that were taking place in the pictures that the participants had submitted. Having an extensive background traveling and working within technical canyons of the Colorado Plateau dating back 24 years, I decided to write about each individual photograph, starting with each participants' Day 1 picture. I dedicated two to four pages to each image; and as I went through them, I tried to concentrate on a different theme for each one. For one I explained in minute

detail the discipline of technical canyoneering. For another I enumerated the flora of the canyon floors. Yet another was a description sunlight. Another was dedicated to contrails in the picture, and how there is a distinction between the two worlds of outside and inside the wilderness, etc. Each one of these first eight began to offer me insight into the participants' perceptions, but they were only partially descriptive of their experiences. As they are valuable to creating an understanding of my data analysis process, I am going to share one of these initial vignettes here, within the body of the study, in order to offer the reader an insight into the process. As they are not directly related to the description and interpretation of the data in relation to the participants' perceptions and/or at responding to the research questions, however, I have not included the remaining seven vignettes in the body of the study. They are included, however, as appendices (see Appendices G-M) in order to elucidate the process of data analysis through prose. I believe that it is informative to this study to provide these vignettes, particularly for future researchers who may be contemplating an analysis of data through the process of prose. Here is my description of Dane's Day 1 picture of the pictures (see Dane U-Turn Canyon Photograph in Chapter IV).

### **Cerulean Sky**

An impeccable cerulean ether neither pulls nor pushes, but ignites, indifferently, the top of the world. Moving visually downward, wispy, azure hues appear into the scene. Alien ships these could be, or, more likely, simply puffs of some distant mist, trickles of moisture caught in space and time and placed here, in an otherwise endless sky. Below, wispy white hues mellow

the dreamy environ, a signal of some form of exchange of worlds. “Lo’le lonanne”<sup>2</sup>, as perhaps some original inhabitant, gazing upon nearly the same scene 14,000 years prior, would have thought of them. The ancients’ presence deftly endures here. Then, a gentle luminosity rests upon a non-azure world below. A distinct contour merges the two domains. The contour is conspicuous, but not impeccable. The line flows from left to right across the scene, dipping on a faint angle in descent, to where undulations punctuate its indifferent drift. This is where the terranean world begins.

This domain commences where these bottommost wispy, azure tones unite with converge with those distant undulations. But unlike the sky above it, the earth here does not visually transform from top to bottom with such stark clarity. A natural fortress of glowing, reddish-brown rock dominates the scene. It penetrates the floor of a deep pebbled and boulder-strewn canyon below, towering into the sky. This could be as high as a hundred humans, or four hundred – it is impossible to tell; and from where we can see it is three times as wide as it is tall. Blanched streaks of dull pink and hues of gray stream from the top, only to collide with a nearly perpendicular line, a barrier, halfway down, that spans the entirety of the monument. Here the unperfect perpendicular streaks turn parallel to the canyon floor, retaining the blanched tints, but yawning and widening in the parallel configuration. A jumble of tens of like-sized tower tops bunch behind the glowing fortress, all with amalgamations of similar color, each with its own sculptures and illiterate syntax and presence. Massive, irregular stone monoliths of likewise

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<sup>2</sup> “The El Morro Vocabulary: ENGLISH - KERES - ZUNI - HOPI - DINÉ LANGUAGES: Vocabulary / Dictionary”. This is the Zuni version of the word for clouds.

reddish rock scatter the back-, and side-, and foreground. They are impossible to describe in their exceptionalities.

Some commence wide at the bottom, growing out of a faint sage on the earth's floor and narrowing as they conspire to reach the endless blue above; but are truncated with flattish or rounded, or knife shaped, or any other of a thousand distinctions of tops that end their ascent. Others initiate on an eminence high on the side of another tower, commencing as wider at the bottom, sucking inward as they grow, and then widening again, shaped like pawns on a chessboard, and then miraculously, precipitously balancing atop much wider, onion-shaped monstrosities that protrude outward and then into the sky like *lúkovichnaya glavasy* atop Russian chapels. Staring into the myriad structures, caricatures can be made to appear. A roaring lion's head here; a drifting, praying cherub there; an oversized otherworldly figure there – or is that one the portrait of some ancient inhabitant's form after a descent from this place into a third, or fourth, or fifth dimension? If the viewer goes down this road of imaginative exploration, the possibilities are endless for what one might envision in this landscape; but there is not only sunlit brilliance in the scene, and in the shadows, the figures fade away.

Streaks of shade contrast the sunlit masses of towers and walls. Captured in a time of day that can only be estimated by the shadows that backdrop the frame, a seemingly massive tower that roughly centers the scene portends the coming of the end of a day. In contrast to the figures that dance in the sunlit stone, here, one senses a chill or a foreboding of being stuck in such an environment at the behest of the night. It comes in from the right, as well, obscuring the details of these north and eastern walls; and the shadows cast from them into the canyon deep below demarcate where daylight begins, and where it is ending. This picture is a stationary scene, but it nevertheless allows for a dance to occur. The shadows cast from the tops of unseen towers tickle

the bottom extremity of the largest illuminated wall like an invading cast of clandestine characters, with almost a feel of sinister laugh. “Here we come,” they’re laughing. “Don’t get caught out here when we take over.” The vastness of the scene gives the sentiment of appreciating a heed to their warning. Between the towers and the clusters of monuments are incalculable swaths of bluffs and buttes and cliffs and ravines. If one strains to see, there are monuments that can be seen straight through – holes in the rocks spanned by bridges of the reddish rock, some cresting and arching over like monolithic stone bows, flexed to the sky and missing its proverbial string, others more flattened, crossing the spans like thick, chipped out pedestrian overpasses. A light sage tinges the voids of the rock world; and a very large canyon appears to snake through the background, away from the sunlight and into the distance. The landscape is so vast and so devoid of civilization as modern humans know it, that yes, with darkness approaching, it must be time to continue to move on from this particular place.”

I offer this vignette to elucidate my data analysis process, and not to describe or to interpret the participants’ perceptions, nor to make thematic or evaluative claims. Upon completing the eighth literary sketch of the participants’ Day 1 photographs, I had still not put my finger on the overall qualitative import of the data, but I was feeling that this process was speaking to me, and I enjoyed the narration, so I moved to repeat the process of describing the participants’ second day photographs.

During the description of the Day 1 photographs, I had largely, deliberately avoided interjecting the participants’ thoughts on the pictures from their interviews. I had come up with a plan to objectively describe each piece of data that I’d collected, and then to make sense of the data more holistically once that was completed. I set to describing the scenes they had submitted from Day 2 with the same intent, but then I was struck with a realization. I have to admit,

embarrassingly now, that setting upon the next round of pictures, I had a moment of disappointment. My first thought was “huh, of all of the things that we saw that day, everyone submitted photos of either Medieval Chamber or the Morning Glory sites.” My next thought, of course, was that I’m a researcher, studying students’ perceptions of their wilderness experience; and that I needed to make some sense of this. But when I really started to investigate the details of the photos, I began to recognize, and then to exult in the magnificence of their choices of photos.

Beginning at the location of Dane’s picture, to Jay’s, to Andrew’s, to Jon’s the pictures cover only about a mere 50-foot stretch of the canyon through which we traversed that day. That’s 50 feet, spread over more than three and a half miles of distance that we traveled. Moving to the next set of pictures, the four Morning Glory pictures from Stormy, Steve, Adriana, and June (in approximate order from south to north, or down-canyon) we see this repeated again. And, to add to the mystery of the first four photos, Medieval Chamber—the proximate location of the first four photos, and Morning Glory Arch—the focus of the second four photos, are very proximate to one another. From where Jon snapped his picture, being the furthest down-canyon picture from the first set of four, he could undoubtedly have turned around and would be seeing the over the top of the Morning Glory Arch, whether it was discernable as such to him at that time or not. So, of eight students’ experience here, eight students’ perceptions of their time in the desert canyons that day are all highlighted in an extremely small space relative to the distance across which the entire day’s experience occurred. I realized that this had to be meaningful in terms of developing a more thorough understanding of their perceptions. On top of that sentiment, I did not feel that I could describe the eight scenes without being repetitive. At that time, I searched for answers to what this meant by breaking my original plan by searching for

connection between the pictures and the participants' descriptions of them in their interviews. This led me to the finding of individualistic intentionality in the participants' experience, which I detail in Chapter V; and it also led me to a more thorough process of data analysis.

I continued to write throughout this entire process—much of that text has nothing to do with this manuscript other than it was my data analysis process, so I have placed them in the appendices of this work, other than the example provided above. Hypothesizing that each participant brought to the desert canyons a unique set of intentions, I began to examine each one of their sets of data to discern the intention. Once a pattern arose between their four pictures, and also what they each said about each of the images during their interviews, I conjectured a primary intention that they'd brought to the course with them. I utilized that intention to describe their data sets more holistically than through the use of one picture at a time; and through those descriptions I began to employ an interpretive lens. The result of much editing and paring down the descriptions and the interpretations resulted in the narratives that I have included in Chapter IV. After I'd completed those narratives, I realized that the way that I'd analyzed the data was through a process of writing; and in hindsight, I was writing to myself. Much of that script exists only in my own extraneous files, as it does not pertain to directly responding to the research questions; but I mention them here to clarify how I analyzed the data that led to the narratives in Chapter IV.

### **Data Analysis Process**

#### **Step 1: Research Questions**

- Q1     How do college students perceive their wilderness immersion experiences?
- Q2     What beliefs, values, and commitments do students foster in response to their perceptions of wilderness immersion?



- Q3 What do these students' experiences inform us about wilderness immersion as a component of educational programming?

### **Step 2: Data Collection Process**

- Data Collection Strategy 1: Participant observation during a college-accredited technical canyoneering course located in the Desert Canyons of the Colorado Plateau. The researcher joined the course as instructor, as “mostly participant” on the sliding scale of participant/observer (Glesne, 2016).
- Data Collection Strategy 2: Collection of the Photographs—Day 1, Day 2, Day 3, and Day 4. Picture collected from each participant, based on the participants’ own interpretation of photos that “best represents their experience from each day.” Total of 32 Photographs collected (See Figures 2-35)
- Data Collection Strategy 3: Photo-Elicitation guided by semi-structured interviews with each participant. Total of eight interviews totaling +/- eight hours of recorded interviews.

### **Step 3: Data Analysis Process**

#### ***Data Analysis Process 1: Contemplation of the Photographs***

1. I gazed upon all eight Day 1 photographs; then each Day 2 photo, until every single day’s eight photographs had been contemplated. I searched for meaning in context of the days’ events.
2. I then contemplated each individual participant’s four photographs. I searched for meaning in context of the students’ individual perspectives.

***Data Analysis Process 2: Data Analysis Through the Process of Prose***

I took each photograph, one at a time and described a notable aspect of what I saw in the picture, through my lens as a “connoisseur” of technical canyoneering and as an adventure traveler and leader within the desert canyons. These led to the vignette, “Cerulean Sky,” and the seven additional vignettes included in this study as Appendices G-M.

I continued this process through Day 1 photographs, and began on Day 2 photographs. At this time, I became aware of the realization that all of the participants submitted photos from a spot in the canyon in very close proximity to one another. At this juncture, I found it prudent to move to the next step in the data analysis process.

***Data Analysis Strategy 3: Cross-Reference Recorded Interviews with Participants’ Photographs***

I searched for meaning as to why the participants all chose an approximate location as their choice of photograph to submit for Day 2. Cross-referencing the interviews with the photographs suggested that there was a finding therein. I looked to every participants’ interview in reference to their Day 2 photograph, and found that the finding that I had theorized came to light with each participant. This led me to the next step in the data analysis process.

***Data Analysis Strategy 4: Watching Interviews, Memo Writing, and Cross-Referencing Photographs***

During this process, I sat and watched each recorded interview. I stopped, re-winded, and watched many portions of the interviews repeatedly. I took meticulous memos, detailing each participants’ particular affinities, uniqueness, repetitions, and themes. I noted each of these attributes according to the time stamps throughout the interviews; during this time, I also utilized

the transcripts of the interviews to cut and paste participants' direct quotes into these thematic categories. As the photographs were on the screen during the interviews, I also cross-referenced the photographs as the participants spoke of them in response to the interview questions. After I had amassed a cache of snippets of thematic information about every participant, I moved to the next step in the data analysis process.

***Data Analysis Process 5: A Multi-Methods Means to Making Sense of the Caches***

I then took each participants' cache of data, and individually searched for an overarching theme in each of their experiences in the course, and specifically in relationship to their perceptions of the desert canyons during their time within them. I did this in many ways, each of which I will detail here.

1. Google searches. I took themes that I found in the caches of information about each student, and simply used keywords in a browser search to elicit further insights. For example, Adriana used the word "contentment" many times during her interview. I simply typed the word into a Google search engine to see what would come up. Many of these, like contentment, yielded definitions, which might lead me to other searches, or might simply help me to understand the participants' perceptions, as in the case of Adriana. Another example is Jay's reference to "The Magic School Bus" in relation to his experience in the course. I typed the words into a Google search in order to obtain more insights, and correspondingly, I began to realize significant similarities between Jay's perceptions of his experience and the television show. I did this for every participant, sometimes for up to a week, before I closed in on an overarching

theme that allowed me to be able to move on to the next step in the data analysis process.

2. Library searches. I took themes that I found in the caches of information about each student, and again used keywords, but this time in library search engines. For example, Stormy referenced Octavia Butler in his narrative. By the time I'd completed learning about Octavia Butler, and specifically the text that he'd referenced, days had gone by as I concentrated on coming to understand Butler and her philosophy in order to understand Stormy's perceptions of his experience in the desert. Likewise, I re-visited much of Aldo Leopold's work through library searches, as Steve's data left me with the impression the sage ecologist.
3. Musical searches. I only did this in earnest for one student, Dane. Her data left me somewhat stumped as I detailed in the section of Chapter IV entitled "It Can Be the Smallest Things, Too." Google searches and library searches left me with little to proceed with. Noting the spirituality that she mentioned forthright and which influenced her perceptions of the desert canyons, I wondered if I might be able to find something in country/gospel music that resounded with her data. I searched the annals of that genre of music for hours but to little avail. While this yielded nothing that I directly utilized in the study, I detail it nonetheless for future researchers brainstorming analytical ideas.

***Data Analysis Process 6: Data Analysis  
Through the Process of Prose***

Readied with the photographs, the interviews, the caches of thematic snippets, and the harvest of the data gained from the multi-methods analytical process, I returned to prose. One by one, each student at a time, in no particular order, I started writing. Writing about the data

allowed me to make sense of the students' experiences. I continued writing, and having developed an understanding of their experiences, I eventually focused in on their perceptions. For each participant, I wrote in the number of 15 pages prior to narrowing in on a descriptive and interpretive narrative. Those narratives, in more edited form, eventually became the sub-sections of Chapter IV.

### **Ethical Standards**

Glesne (2016) posited the question, "How can you know your interpretation is the right one?" and then follows with the statement, "...is a trick question" (p. 213). She went on to explain that "no right interpretation exists" (p. 213). I approached this study with the intent to make a case about students' perceptions of their educational experiences, specifically within the desert canyons. It has been my utmost objective to bind the study in the annals of educational research through a strict adherence to the highest ethical standards possible. My ultimate concern has been that my interpretations of the participants' experiences are represented herein with honor and respect. While my interpretation of the eight participants' may not be "right," I have endeavored to make every effort of which I know to offer a sincere analysis of their perceptions. The following sections describe the standards I followed to lend credibility to this study through an assessment of the data the participants so graciously extended to me for the purposes of this study.

### **Rigor and Quality Through Trustworthiness**

In Peter Novick's (1988) landmark historiography, *That Noble Dream*, the author entitled his introduction "Nailing Jelly to the Wall" (p. 1). The titles of both the book and the introduction offer the reader a preview of Novick's thesis. In the nearly 700-page work, Novick explains, in nuanced detail and with robust scholarly backing, that the most diligent practitioners

of objective research procedures remain unable to fulfill “that noble dream” of being fully unbiased in their work. Attaining objectivity, he writes, is as viable as the physical act of nailing jelly to a wall. Novick argues that researchers must construct their stories through thick description, connectivity to existing literature, and a practical grounding in trustworthiness. Having begun my academic career in History, I have come to know Novick’s methodological assumption in practice; now, having transitioned into educational research and grounding my current research in educational criticism, I find that Novick’s eschewing of neutrality can be refined.

Like Novick, Eisner (2017) believed the aspiration to neutrality to be “inherently flawed” (p. 176). He did not ask clemency for bringing personal experience into a research project; instead, he mandated it. Eisner explained the utilities and liabilities of antecedent, or prior, knowledge and proposed a process for connoisseurship that he called “epistemic seeing” (p. 68), which involves combining prior knowledge brought into an experience with a consciousness of the biases gleaned from prior knowledge and the ways that we are used to seeing things done. The stakes of educational critique are more tangible for the educational critic, whose goal is to improve schools, than for the historian, who relates a story of the past. When a historian tells a story, the author will inevitably (and perhaps unwittingly) slant the story to shed a certain light upon it. Histories are related as discourses that, again, perhaps unwittingly, make recommendation on the way that people should live in the present, not the past. Likewise, when an educational connoisseur tells a story, the educational critic makes recommendations on how future stories should unfold in the world of education. The existence of the critic’s story results in direct impacts on the lives of actual students. This section examines how we can adhere to

Eisner's call for interpersonal perceptivity in educational criticism while also ensuring that our work passes high standards of rigor and quality.

Houghton et al. (2013) examine the use of four criteria to set the standard of rigor in qualitative research. Their criteria come from the work of Lincoln and Guba (1985) in *Naturalistic Inquiry*, who proposed that strategies for determining rigor arise from the approaches based on credibility, dependability, confirmability, and transferability. They argue that "while the flexible nature of qualitative case studies should be embraced, strategies to ensure the rigor of such studies need to be in place" (Houghton et al., 2013, p. 16). They offer strategies for cementing rigor into research projects through the approaches listed above. Methods for safeguarding credibility include "[p]rolonged engagement and persistent observation; triangulation; peer debriefing; and member checking" (Houghton et al., 2013, p. 13). Strategies for upholding dependability and confirmability include audit trails and reflexivity. They ensure transferability by providing thick descriptions of the research participants' experiences.

Stake (1995) calls all measures for ensuring validity and reliability forms of triangulation. In celestial navigation, he argues, triangulation is used to establish location, while in qualitative research, the goal is to establish meaning. Stake describes four various types of triangulation: data source, investigator, theory, and methodological. Data source triangulation involves examining constructed educational experiences at other times, in other places, and with different players. Investigator triangulation involves other researchers scrutinizing the same educational experience. Theory triangulation is a process wherein other observers, panelists, or reviewers with alternative viewpoints review and comment upon the research project in a process similar to what Eisner termed and described as *consensual validation*. Methodical triangulation involves utilizing multi-modal research methods within a project in order to make a holistic case. Eisner

(2017) called the process through which “multiple types of data are related to each other to support or contradict the interpretation and evaluation of [the participant’s experience],” “structural corroboration” (p. 110). Like triangulation, structural corroboration provides a “coherent, persuasive, whole picture” (Uhrmacher et al., 2017, p. 59).

In “What can you tell from an N of 1?”, Merriam (1995) maintains that the issue of trustworthiness “looms large” in qualitative research. She makes the case that because research is designed to inform and change practice, thereby affecting the lives of real people into the future, researchers must ensure that their content is rooted in thoroughly vetted information.

“Qualitative research,” she argued, “assumes that reality is constructed, multidimensional and ever-changing; there is no such thing as a single, immutable reality waiting to be observed and measured” (Merriam, 1995, p. 2). She maintains that potential bias or non-accountability in qualitative research may be mitigated via the methods outlined above in Stake’s (1995) and Houghton et al.’s (2013) studies. She adds, however, that human behavior is extraordinarily dynamic and that this fact places qualitative research in its own category of validity and reliability regardless of the rigor of the researcher. Qualitative research is an artistic endeavor that requires imaginative approaches in order to prove its quality (Houghton et al., 2013).

*Referential adequacy* serves dual functions of “illuminat[ing] the subject matter” and “bring[ing] about more complex and sensitive human perception and understanding” (Eisner, 2017, p. 113). Eisner (2017) called referential adequacy the most important measure of a criticism’s value and maintained that it underlies all standards of rigor and quality in educational research. I have designed this study as an artistic endeavor that aspires to illuminate the data in a way that offers the reader a complex and sensitive portrayal of the students’ experiences and perceptions of those experiences during the course.



### **Protection of Participant Identities and Interests, and Ethical Standards**

The data collection for this study included the 32 student photographs, semi-structured interviews, and my passive observations during the course. The participants each read and signed a consent form to assist in ensuring that they understand the purpose of the study and that their identities would be protected (see Appendix B). The research project did not disrupt or manipulate participants' normal life experiences or incorporate any form of intrusive procedures. None of the information obtained during the project has been recorded in such a manner that human participants can be identified, either directly or through identifiers linked to the participants. I have referred to the participants by pseudonyms; and only I and my research advisor have access to the data matching the pseudonym with the students' real names. This information will be used for recruiting and reminders only and will not be used in data collection or analysis. All recordings of the interviews have been electronically locked and will be erased three years after the publication of this project. The research project and data collection were approved by the Campus Vice President of an accredited college and was designed to study and evaluate students' experiences in a course run by that college. All participants were at least 18 years of age, and the study did not involve pregnant women, fetuses, human in vitro fertilization, or prisoners.

The research was conducted under the purview of the research advisor, and under the explicit statutes and recommendations of the Institutional Review Board (IRB) of the University of Northern Colorado (see Appendix F for approval). Glesne (2016) delineates five guidelines that inform IRB decisions, which I have followed meticulously:

1. Participants in the study were offered sufficient information to make informed decisions about participating in the study.
2. Participants in the study were offered the opportunity to withdraw from the study, without penalty, at any point.
3. There were no unnecessary risks to participants' health or safety in the study.
4. Benefits to the participants in my study and to society outweigh potential risks.
5. I have not conducted experiments within the study, and have engaged in only the collection of data for which I am qualified at the discretion of my research committee and the IRB of the University of Northern Colorado.

This study is founded upon ethical practices and transparency throughout; and in making rigorous efforts toward the protection of my research participants' identities and interests, and toward grounding the project in practical and binding principles.

### **Summary**

In this chapter, I detailed how I used educational criticism and connoisseurship to conduct this study. I have explained the study design, from the data collection process, to the data analysis processes that I utilized. The final section of the chapter concludes with a meticulous explanation of the ethical standards that I have adhered to throughout the project. The next chapter includes descriptions of the participants' perceptions of the desert canyons of the Colorado Plateau. My interpretations are likewise embedded throughout the descriptions of their experiences.

CHAPTER IV  
DESCRIPTIONS OF THE PARTICIPANTS'  
PERCEPTIONS OF THE CANYONS

The purpose of this dissertation was to study college students' perceptions of the desert canyons of the Colorado Plateau. In this chapter, I describe the participants' perceptions of their experiences in the desert canyons in which they ventured during their course. In my quest to illuminate their individual experiences, I have dedicated one section to each participant, offered in no particular order. The photographs that the participants offered me were interwoven with their interviews, as well as my "mostly participant" rather than "mostly observer" recollections of them during the course (Glesne, 2016, p. 65). As each of them exhibited a prodigious amount of intentionality in their experience, I narrate their perceptions through a thematic lens of intention. It is my aspiration that the reader will come to understand not the full sensory experience of the participants' time spent in the desert canyons—although there will be an extent of that manner of comprehension that will be gained—but rather, that the reader may discern each participant's unique perception of his or her individual experience.

**Inimitable Intentions**

The only true development in American recreational resources is the development of the perceptive faculty in Americans. (Leopold, 1949, p. 174)

**June Pavletich**

June Pavletich entered into this course with a wide range of experience that was discernable in the pre-field meetings. She had completed Colorado Mountain College's Outdoor Recreation Leadership Associate's degree program, which involves a substantial amount of

wilderness immersion experiences. The program facilitates building competence in technical skills from many outdoor adventure disciplines, and leadership skills are interspersed throughout the program. She knew almost all of the knots that we practiced during the course; she was proficient with the use of the harness and helmet; she'd been technical canyoneering for six days prior to our course, also in Utah not too far from where this course took place. She demonstrated natural leadership abilities from our first meeting at the college campus prior to the field days, eagerly but not overbearingly aiding other students as they practiced the entry level skills that we introduced during those first meetings.

June submitted sublime photography. Her pictures stand out in their discernible splendor and celebration of the beauty of the desert wilderness setting. There are no people; only vivid desert scenery. All of them juxtapose cathedrals of desert sandstone against stunning cerulean skies. She included wispy clouds and touches of either flora, or in one picture, a conspicuous scattering of chunks of rockfall to accent the scenes. They have an air of grandeur, splendor, and seclusion (see Figures 1 and 2).

**Figure 1**

*June Pavletich: U-Turn Canyon*



**Figure 2**

*June Pavletich: Medieval Canyon and Morning Glory Arch*



I recalled that June was, in addition to being quite adept at the technical skills we utilized during the course, also eager to be the first to rappel. I understand the enthusiasm to be first – to enter into what can feel like a world unknown, to be there alone, by oneself, feeling truly immersed with no other person around, only you and a vast, untamed landscape. I've had the same feeling myself many times. To be the first one to slide over the edge into a questionable next dimension below; or leading a kayak down a Class V maelstrom, only the rhythm of the river to guide you; or jumping into an avalanche chute, eager for the first turns of untracked snow, but also, as with all of these ventures, a nervous energy rising from the gut about the stability, the safety, of the terrain onto which you move. June's pictures stimulate this feeling. It is what turns people into lifelong adventurers, guides, outdoor educators; and there is something about the juxtaposition of her enigmatic photographs and her experiences and words that hint at the premonition that June's path is in outdoor leadership.

The combination of her pictures and her interviews, alongside my observations of her during the course, lend me to believe that June entered this course, and hence the desert wilderness landscape, with an intent to strengthen her already generous repertoire of outdoor leadership. In many ways, she reminded me a lot of my younger self in terms of how she interacted with the course and with the others on the course. Her pictures invoke that thrilling, shaky feeling of mysteriousness that I described above. That feeling is ultimately what I look for in many of my outdoor experiences. It's about being on the edge, literally. Wilderness environments, all of them, are replete with hazards. There is something deeply and inexplicably gratifying, about facing those hazards with open eyes, understanding the consequences, and either systematically or instinctively working a way through. That impression is demonstrated in June's photographs. She embraces the hazard through a celebration of the magnificence of the

place that bestows the risk. We must love those places, and work with those places, in order to navigate through them successfully. If one arrives ready to conquer through strength of human spirit, in the wilderness, that one will lose. I have witnessed this happen repeatedly. I have even been the recipient of the loss, the loser, to hardheaded struggles against the wilderness. June embraces the place, as a part of the understanding that that is part of the experience. In austere backcountry environments, you share in what it offers you. You cannot fully prepare for the worst of what those environments have to offer, but you can certainly embrace those places and work within them as a human visitor. When you have fully embraced those places, and all that they have to offer – from joyous to terrifying – you are ready for leadership there.

June specifically mentioned leadership as she contemplated her picture (see Figure 3). from Tierdrop Canyon during my interview with her. She mentioned how she enjoyed being the first to descend first rappel in the canyon, and when she reached the next tier of the canyon, she inspected the boulders that served as natural anchors above the second rappel, and began to set up the anchors prior to anyone else being there. “I felt like I took more initiative in leading during this part,” she reflected, continuing in detail how she meticulously handled the system from inside and out, “looking at the webbing, looking at the quick links, and everything involved with that. So that was really cool, and allowed me the chance to feel more confident in my own knowledge with natural anchors.” I asked her to explain how this reflection made her feel about her leadership abilities. She expressed pride that she’d taken the initiative to teach some of her other classmates as they landed at the bottom of the first rappel and came over to join her at the top of the third rappel. She used the word “confident” several times, and glowed at the opportunity that she’d had to share her knowledge with others:



I was teaching [the other students] different ways of setting up the rappel, different ways to do the clove hitch, making sure that they understood it and they felt comfortable doing it themselves, and giving them the chance to, like, set it up while I was there so they felt comfortable and confident in themselves, as well. And, I think I learn really well by teaching others through things, so being able to help teach them also helped me learn how to be a better leader. I think that was really beneficial.

June's narrative reveals her aspiration to practice leadership, and to continue to develop her leadership abilities. She understands that through sound practice, she has moved across the threshold from beginner to that coveted place, in her mind, of leader. It is a coveted place in people, like June and I alike, who crave the feeling that I described above. We understand that we will not be able to repeat that feeling over and over through life without moving beyond the threshold from beginner to leader. I did, and continue to do, the same thing as June, so I understand this sentiment. June repeatedly, and with an almost enchantment, mentioned the point that with her skillset, she would be able to go technical canyoneering into the future.

**Figure 3**

*June Pavletich: Tierdrop Canyon*



Reflecting upon her U-Turn Canyon picture (as seen in Figure 1), she spoke in admiration of the inaccessibility of the place, noting that “a lot of people don’t have the chance to go” into technical canyons. She mentioned that no one in her family had ever “done anything like” technical canyoneering. She moved back to her assessment that it takes leadership to be able to continue to visit places like the backcountry desert canyons. She spoke in terms of the development of skills that open up that world to her, including experience, knowledge of the environment, safety precautions, and the like. I prompted her as to why it was important for her to develop the skills necessary to do it on her own. She responded the healing properties that she felt within the environment, directing the remedial properties of the place as necessitated from stresses “back home, assignments, and homework, being in a city and everything,” finishing her thought that being in the wilderness, “let[s you] take a step back and actually like, gather [yourself], if that makes sense.” She repeated these sentiments- the love of the isolated environment; the uniqueness of the experience; aspiration to continue to learn more, so that she can do more; so that she can spend more time in remote places as a restorative process.

As she viewed her Morning Glory Arch photograph (as seen in Figure 2), she spoke with reverence for the experience behind the image. “I kind of think that this is something that was amazing that we get to do,” she reflected. She again noted her learning and the skillset that she was building upon that would continue to offer her more opportunities to visit remote places into the future. “We [all of the participants in the course] have all the knowledge to be able to go to a canyon by ourselves,” she asserted, continuing, “and that is a step apart from what most people get to experience their life.” She moved beyond the uniqueness of the experience for her own sake, however, moving back to the importance to her of leadership and sharing.

June mentioned safety, being far from medical attention, and teaching others at other times during our interview; but during our conversation, June's sentiment of a longing to be a part of the outdoor world went beyond the desire to continue to develop her skillset for the lone sake of being able to get herself and to assist others in simply accessing wilderness places. To me, as a lifelong adventurer and leader of outdoor ventures for nearly decades, I am indelibly part of this world. I reiterate this distinction because what follows indisputably places June in this world, as well; and that distinction, for the sake of this manuscript, fortifies her intent, which persuaded her perception of her wilderness immersion. She first, in her pictures, demonstrated a fascination with the experience of the wilderness place. She then demonstrated an understanding that the only way to repeat those experiences is to learn how to be the leader. But then she made the jump from those concepts to what develops next when you are a lifer in wilderness adventure. What follows cemented my confidence that June is a lifer.

It takes places like the desert canyons to develop a longing like June demonstrated to be part of something larger. Relationships oftentimes provide the foundation for wilderness adventure. June makes the leap to recognizing the importance of relationship in wilderness venture in her narrative. Recall how, in Tierdrop Canyon, June recounted helping some classmates to understand the anchor systems and other technical skills. She at least partially tied the enjoyment of this experience to her own learning. I will leave this in category two of her passion for the wilderness environment, learn how to the leader. Note how she framed her experience of the same picture, the same place, in her narrative, prior to my prying interview questions. "There are a lot of memories attached to this picture," she stated, and continued:

So, I got down there first with one of my classmates and we had a chance to explore; but then we ended up sitting in the sun and waiting for everyone else to join...just [enjoying]

the feeling of the warm canyon sun while we were sitting there. All of us just playing, I think we were playing, “I Spy” [she laughs, with a great smile on her face], eating snacks. And then we ended up all taking a group picture pretending to be a band because we ended up standing all in a row. And so, there's just like, a lot of really good memories attached with this (as seen in Figure 3).

Human connection is the part that I didn't realize when I signed up to enter river guide training nearly 30 years ago. Human connection, and the relationships formed therein, are, to me, the most powerful and lasting part of wilderness immersion. Bonding with others, and relationships, like wonder and awe and thrill, and skill and safety and life-and-death boundary setting, is learned, and is a continual learning process, as well as the other parts of wilderness immersion. This takes place both inside and, perhaps equally, or even more importantly, outside the wilderness setting. June described bonds that she formed with her classmates and instructors during the course at several times during her interview.

June feared the idea of being in pools of water within the canyons. She had had a negative experience in a canyon in the past. She described her reaction as a panic attack; and was therefore fearful of our final day, when we hoped to do a canyon with some pools of water that were mandatory to navigate through. The instructors of course made this canyon optional (we had a back-up plan if she were to discreetly give us the word), and also intentionally made this the canyon for our final day. We hoped to garner some trust and a support network by that time. June decided that she'd go for it. She spoke endearingly of her fellow classmates when describing this final day.

She pondered herself overcoming her fear, having successfully navigated through several long and deep sections of water in tight canyon spaces without panicking. “I think everyone's

emotional response,” she said, “and just, willingness to be there [for me] was crucial to that.” I have witnessed this many times in my career; but it still strikes me how quickly people form such tight bonds when immersed in environments like this. June mentioned her fondness for the group that supported her several times. “If I were to ever make a mistake,” she stated, “I knew that I had people to help me.” The initial desolate grandeur of June’s photos demonstrates the commencement of a complex and intimate perception of the place that ends with an endearment for the group that she traveled with on her journey. She did not speak negatively about a day that she had overcome a paralyzing fear, and was later cold and shivering. Rather, she spoke of her classmates. “Everyone, everyone was so kind,” she emphasized, “and so nice, and so just very supportive; and that was one thing that I tie with this canyon, just the kindness of everyone involved.”

I did not press her on this; June revealed her feelings unsolicited. She took it even one step further near the end of our interview, portraying her attraction to people at large who participate in outdoor activities beyond the setting of this course. “One thing that has always struck me about other people in our industry,” she ruminated,

It is just how kind and giving they are of themselves. I don't think there's been a single person I've met who has been that's, like, unkind... That's something I find very, very interesting about people in outdoor industry, just how generous they are with their, their time, their gear, and stuff like that. I think, knowing that, versus the people that I've known in the past in different, like, careers. Outdoor people have always been much kinder. I think that's very fascinating.

June straightforwardly reveals her fascination with the people, the culture, of those who involve themselves within the outdoor industry.<sup>4</sup> She expressed that she did not know until sometime in adulthood that the ‘outdoors culture’ existed. She does not want, “can not,” in her own words, work a “nine to five” job. She tried, she said, and it didn’t work. During the course, she was at a point in her life where she was crafting her own inclusion in a new culture of which

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<sup>4</sup> I find the “outdoor industry” to be a nebulous phrase. It encompasses many activities that take place in mountain, river, and desert environments. Cross country mountain biking, trail running, backpacking, canyoneering, rock climbing, backcountry skiing and snowboarding, whitewater kayaking, whitewater and multi-day rafting serve as examples. It also encompasses some activities that occur in ocean environments, like sea kayaking.

It doesn’t necessarily include the surf industry, however, which seems like it is its own thing, although many people who engage in a lot of these other activities also surf, and vice versa. It doesn’t fully include the ski and snowboard industry, either, replete with its hordes of lift-bound vacationers. It doesn’t necessarily include all of the huge money-generating “industries” either, like hunting and fishing.

The phrase includes people that work a profession earning a living in some of the included endeavors, but also people who immerse themselves in one or more of these activities and form a lifestyle around it. I also believe that there is no consensus in the “industry” on what constitutes inclusion. Anything from equipment retailers to ski-town restaurants could potentially claim a foothold in the industry. For the sake of June’s statement however, I believe that she means people who choose to immerse themselves in outdoor environments regularly and form a lifestyle around it.

she is fascinated; and that inexorably shaped her perception of her wilderness immersion (see Figure 4).

#### **Figure 4**

*June Pavletich: Rock of Ages Canyon*



#### **The Magic School Bus**

As I reviewed the data surrounding Jay's experience in the course—his photos, questionnaire response, and our interview—I initially found it difficult to pinpoint any specific intention that would lead to a putting an explanation on his perception. Of his photos, there are a couple of magnificent views from the top of U-Turn Canyon (see Figure 5); one from inside the



Medieval Chamber that offers one of the best perspectives of the pool in the middle of the rappel (see Figure 6); one from the bottom of Tierdrop Canyon (see Figure 7) that includes in the backdrop some of his classmates huddled at the bottom of the final rappel on Day 3; and one that is unlike any other that I received from anyone—a close-up of the desert floor with Jay’s own shadow positioned in the front of the picture (see Figure 8). I thought back to my loose observations during the course.

### **Figure 5**

*Jay: U-Turn Canyon*



**Figure 6**

*Jay: Tierdrop Canyon*





**Figure 7**

*Jay: Medieval Chamber and Morning Glory*





**Figure 8**

*Jay: Rock of Ages Canyon*



Jay was exceptionally respectful; and his behavior was impeccable. Behind his irreproachability there was an air of animated, enthusiastic energy. Jay was excited; and it was palpable. A palpable excitement can be nerve-wracking for instructors who are working with a group of dispersedly skilled students in hazardous terrain; but Hannah and I quickly learned that Jay was not a threat to himself or to others. He was as excited as just about anyone that I've ever witnessed on a course who was able to likewise respectfully and safely control his energy. Near the end of his interview, indeed in his very final sentence in the interview, he divulged his perception of wilderness immersion. Jay told me, "I feel like I'm on *The Magic School Bus*."

*The Magic School Bus* (Wikipedia, n.d.-c) was an educational cartoon series that involved a cast of children who, each week on a new episode, took a field trip in a fun and fairy-tailed magical bus to places where they would explore new worlds. The kids soaked up the ecosystems of these new places, kinesthetically investigating and learning about foreign environments in fun and exciting ways. It aired as a cartoon series as an original series on PBS from 1994 to 1997 (Wikipedia, n.d.-c). It ran nearly continuously as a rerun series on PBS and then later on Fox Kids through 2002. On the series, the cartoon kids traveled through the solar system, explored the digestive system of a human being, discovered what the inside of a volcano feels like, and are turned into city animals and were set free to see how they are to survive. They also, sure enough, on Season 1, Episode 7, which first aired October 22, 1994, discovered the desert environment. Jay would have been almost four years old when the first episode aired in 1994, and 11 when it was removed from regular programming.

I looked back at Jay's pictures, his words, and the exceptional way that he conducted himself on the course; and then I went online and watched Season 1, Episode 7, of *The Magic School Bus*: "All Dried Up" (The Magic School Bus, 2021). I do not know if Jay ever watched this episode when he was growing up. Indeed, I did not think to ask him during the interview if he watched the cartoon at all. I only had a vague familiarity with the show. The similarities between "All Dried Up" and technical canyoneering, however, are remarkable. The students enter the desert in a scary vertical freefall plummet in their flying bus, but land softly at the will of their trusted teacher, Ms. Valerie Frizzle. I could not help but to think of this entry into the exotic desert landscape as mimicking our rappels, replete with the guidance of seasoned instructors. Dangers abound following their landing. The students are chased by an oversized roadrunner; they find themselves hot during the day and cold at night; thirsty; hungry; a flash

flood overtakes them all; they awaken from the night in tents. Arnold, who carries a large backpack, is prepared for anything and is able to take care of all of their ailments. Ms. Frizzle stimulates their curiosities as they travel, always offering them the opportunity to learn, to make mistakes, and to resolve issues through their own investigation, while at the same time never allowing them to cross the line of too much danger. The episode really has numerous likenesses to a technical canyoneering course.

The kids in *The Magic School Bus* cartoon are curious, excited, stimulated by their experiences; and they all have their own unique characteristics that are always revealed in the episodes.<sup>5</sup> Being imaginary, and being developed to appeal to young children, their attributes are candid, and after a couple episodes of viewing, predictable. Their fictional personalities are fun. The book series, written by Joanna Cole and illustrated by Bruce Degen, sold more than 93 million copies worldwide; and alongside the cartoon series, has been awarded critical acclaim across the globe. Among the awards that the book and the series were bestowed include some of the world's most prestigious, including the NEA Foundation Award for Outstanding Service to Public Education; Oppenheim Toy Portfolio Gold Award Parent's Choice Award; An American Booksellers Association Choice; IRA/CBC Children's Choice; School Library Journal Best Books of the Year; NCTE Notable Children's Book in the Language Arts; IRA Teachers' Choice; A Horn Book Fanfare; Parent's Magazine Best Books of the Year; Reading Rainbow Selection; Daytime Emmy Award; Annenberg Public Policy Center Award for Outstanding

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<sup>5</sup> For a deeper explanation of the characters in the show, I recommend seeing the descriptions on "List of *The Magic School Bus*" characters on Wikipedia (n.d.-b), [https://en.wikipedia.org/wiki/List\\_of\\_The\\_Magic\\_School\\_Bus\\_characters](https://en.wikipedia.org/wiki/List_of_The_Magic_School_Bus_characters)

Educational Program on a Commercial Broadcast Station; six CINE Golden Eagles; American Women in Radio and Television's Annual Gracie Allen Award; National Wildlife Federation's (n.d.) National Conservation Achievement Award for Education; Environmental Media Association Award for Children's Animated TV Program (won in 1995 and 1997); National Education Association Award for Advancement of Learning Through Television; National Educational Media Network Gold Apple; Parents' Choice Gold Medal for Excellence in Children's Programming; and, Parents' Choice National Television Hall of Fame Classic Award (Newsroom, 2022). The narratives behind these honors demonstrate that the book series and the show were beneficial to the development of positive attributes in children that had the potential of achieving long-lasting effects.

Jay brought a wonder, a joy, and an exuberant, animated energy to our course that cannot go understated. It was his first time in a desert wilderness environment; he was the only one on the course who hadn't spent at least some time in the desert. He showed up ready to explore and to learn. June described Jay with a broad smile during her interview, remembering the last day of the course. "We [everyone else who was there at that moment] were just laying out, enjoying the sun, and then one of the guys was running around just trying to find lizards and stuff, and, it was just a really nice sense of our last day". Remembering back to this moment, June's description of Jay is right on target. I went back and looked at Jay's picture and his interview from this day. Sure enough, the photograph that he submitted lines up with the time frame of when June mentioned him. The photograph seems unstructured. There's prickly pear cactus, and blackbrush, and rabbit brush, and pinion, and sand, and stones, and slickrock. I have spent years of my life in this environment; so, when I saw this scene, I looked for more. There must be a desert jackrabbit hiding out in the brush, or a blue-bellied plateau fence lizard hunkering in the

shadows, I thought. But I found none of the sort. Just the vegetation, and the rocks. I asked Jay to describe his picture.

So, I was really taking a picture of the cacti here... I thought it was so cool seeing all the different cacti – there's a lot in that area. And then there's the lizards running around and these are just elements that I'm just not used to... So, as much as I was excited about the [technical part of the] canyons, as I was...very excited about the environment, and the change in vegetation, and just really checking out wild cacti growing!

His wonderment remained evident, even though some time had passed between the course and our interview. I still do not know – I don't even know if even he would be aware of it or not – if watching episodes of *The Magic School Bus*, or having the book series read to him by some parental figure during his formative years, had an influence on Jay's perceptions of the desert wilderness environment. The fact that it was his first time in the desert environment surely had some impact on his exuberance. But I taught for the Colorado Outward Bound School out of the Vernal, Utah, and Moab, Utah basecamps for seven year; and have since led many river, canyoneering, and technical canyoneering desert trips through my work both as a guide and an instructor; and having met many clients and students who had never spent time in the desert prior to their trips with me, Jay's excitement was beyond the norm. I asked him what emotions he felt about one of his pictures. The excitement in his response is tangible:

I feel like going back again, will make me feel, feel...okay, like I want to...share it with other people. I don't [want to] overuse the word excited, but going back, I just, really [want to] enjoy, just, get my heart and blood raised again. Like, let's go see some more of this! And, I really want to venture out and see what more there is to offer than I haven't [experienced]. So, [I] am feeling like I want to learn more about it.



It is not whether the cartoon or the book series influenced Jay's perception that is important, but it is a fitting metaphor for the kind of exuberance that he revealed in his actions, his picture choices, and his words. I want to demonstrate another striking similarity between Jay's perceptions and his intent. The Magic School Bus was the recipient of such profound critical acclaim partially because of its dedication to environmentalism. In 1999, the cartoon series was awarded the National Wildlife Federation's (NWF, n.d.) National Conservation Achievement Award for Education. The NWF website explains the award as an honoring, "extraordinary conservation heroes." "The awards," the site continues, "were created to recognize esteemed partners who have helped the Federation shape some of today's most crucial conservation wins" (NWF, n.d.). Interestingly, *The Magic School Bus* was the only cartoon, indeed it was the only television show of any kind, to every win the award in any category, in any year of which the NWF offered conferred the honors.<sup>6</sup> In 1995 and in 1997 the show won the Environmental Media Association Award for Children's Animated TV Program. The EMA describes their mission "to provide a unified voice for our planet through entertainment, storytelling, and education, and their goal to "empower a circular green economy for all people, which means environmental justice for the most vulnerable communities" (n.p.). Episodes of the show reveal an intent to demonstrate that the natural world is self-sustaining, but that it is fragile

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<sup>6</sup> The NWF award was given out in various categories ranging from 1965 through 2011. Most of the recipients were individuals and organizations. The list of categories, years, and recipients is 15 pages long, and can be found at [https://www.nwf.org/~media/PDFs/About/Connies-Awards/Connie%20Complete%20awardee%20list\\_12-5-11.ashx](https://www.nwf.org/~media/PDFs/About/Connies-Awards/Connie%20Complete%20awardee%20list_12-5-11.ashx)

without human care. Many of the episodes include latent lessons in environmentalism and/or sustainability. Like the characters in the show, Jay arrived in a new environment eager and ready to explore, to investigate, and to learn; but because the *Magic School Bus* kids are cartoons, we do not ever get to know how they utilize the lessons of which they exposed. Jay, however, makes his intent apparent. He demonstrated an enthusiasm for taking his knowledge to the next level.

Jay indicated that he wants to help preserve wilderness places. Throughout his interview, he implied that he is the type of learner, however, that needs have a tangible understanding of places before he can move forward with helping. “I feel like in order to confidently know that you’re treating [wilderness places] right,” he said, “you should be learning the proper way. So, rather than just going off on your own and figuring it out or destroying things, ...it’s really nice to actually have core knowledge to apply...it helps me grow.” In several places throughout the interview Jay mentioned being appreciative of having had the opportunity to “develop the skills needed” to experience the desert wilderness. Whereas many students in a technical skills-grounded course like this one lean more towards an interest in the expertise of the discipline, however, Jay had a different view of it. To him, the technical skills involved are more of an amusing hitch that comes with the greater journey of canyon exploration.

Technical canyoneering skills, to him, were secondary to the immersion. He expressed gratitude that he’d learned about how to travel through the canyons, and also that he had fun rappelling and getting exercise, but for him, there was much more enthusiasm about having seen and experienced firsthand, this one time, the places that we explored during the course more so than the specialized skills involved in this type of canyoneering. “I mean, I have now canyoneering skills that I did not have before,” he affirmed, literally shrugging his shoulders in an ‘oh, no big deal’ type of queue; but more importantly, his attitude suggests, he continued “a

more well-rounded view of different ecosystems, and just the vastness of the world”. As I read and re-read, and watched and review his interview, I kept thinking of one assertion that Jay made as he described his interaction with Medieval Chamber. He used the word “technical” to specify the complexity, the intricacy, and the diversity of the canyon that he experienced. This technical was not about our ropework. “This part of the canyon really showed me,” he imparted, “that it’s really the canyon itself that’s technical.” Describing physical qualities of that space, he continued, “everything’s doing its own thing without human involvement.” He spoke through this section very slowly and methodically, “And so, it kind of, gives you perspective on [seeing] nature dealing with itself”. Jay truly relished his immersion in the desert wilderness. He felt that the experience truly developed and matured a passion within him that was nurtured sometime before he arrived in the desert, possibly partially as he watched episodes of, or flipped the pages of *The Magic School Bus* more than two decades ago in the past.

Jay mentioned the words “ecosystem” or “environment” twenty times during our 40-minute interview. In many instances, he attached terms of endearment and/or admiration to them. Several times, he iterated how his canyon experience had “reinforce[d] his love for the environment, and respecting ecosystems.” Reflecting on his Tierdrop Canyon photo, he stated that he has a “love” of viewing “the earth being the earth without human interaction or destruction”. He specifically called his “love,” in instances, and “respect,” in others, for the environment or desert ecosystem a “reinforce[ment],” indicating that he arrived to the desert with these feelings, even though he had never been to the desert before. Jay’s intent was to foster, to grow, and to mature that love and respect through an actualized kinesthetic experience with the place. He mused fondly upon the “irreplaceable knowledge,” that he’d learned, “kinesthetically, by doing it hands on”. But even more so than love or respect, he revealed his deepest intention as

one of a more preservationist, or at least conservationist, perception.<sup>7</sup> He continued on from the last passage, articulating that the education that he'd received through the experiential desert venue most importantly left him with lessons about humanity should "view and treat the environment".

This was another common theme throughout Jay's interview. Throughout our conversation, he repeated phrases like, "take care of the environment", "appreciate the desert environment", "conduct [one]self in the desert", and "connection with the wilderness environment". Near the end of the interview, I asked Jay if reflecting on his four pictures made him feel more emotionally or intellectually devoted to anything. He responded simply that his first mission was, "To take care of the environment, and [to] promoting wilderness conservation". Jay's intention was to solidify something that he already had inside him, a desire to come to know the ecosystem of the desert environment so that he could have a reason for wanting to protect it. He made a "connection" with the desert wilderness environment, as he called it, even going so far as to call it a "bond" with the place. That was what it took for Jay to move from respectfully and enthusiastically excited about exploration, to an interconnected advocate of the wilderness desert environment's interest. His desire to aspire to advocate for places like the desert environment brought him to the course wanting to get to know the environment intimately. This, in turn impelled his complex, beautiful, and respectful perception of the place.

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<sup>7</sup> For more on the differences between preservationist and conservationist, see Chapter II in this manuscript, Review of the Literature.

## Monumental Reverence

Steve reminded me of a kind of a modern-day Aldo Leopold (1949). The land-management issues, alongside people's needs and desires, that existed in the early to mid-20<sup>th</sup> century have changed from those that exist today, but that many qualities in both circumstances endure. Leopold legacy maintains him as a visionary theorist on the juxtaposition of these two entities. As I viewed and re-viewed my interview with Steve alongside his pictures, which, as we learned before, are canyon vistas that he intentionally included people within (see Figures 9-11), his intentionality and his words oftentimes yielded the same tone as Leopold's, fast-forwarded nearly a century into the future. Leopold repeatedly wrote of the lack of education surrounding land ethics, the value of the landscape beyond economic terms, and the import of sustaining the land for communal health (pp. 191, 209, 225). Steve mused similarly about wilderness landscapes. He spoke of "prioritizing [the] educational message [of] the value of [wilderness] places," elaborating on that value as including "emotional [import]...but also... [significance for] communal health". He went on to offer specific examples that ranged from, "places for mental relaxation," to "water resources". As I re-listened to Steve's words, these spoken as his photo from Rock of Ages Canyon (see Figure 12) glistened the screen in front of us, I couldn't help but to think of the foreword in *A Sand County Almanac*, written by the visionary Leopold in the 1940s. "We abuse land because we regard it as a commodity belonging to us," Leopold wrote. "When we see land as a community to which we belong, we may begin to use it with love and respect" (Leopold, 1949, viii). Throughout Leopold's works, he repeatedly wrote of elements of his ethic that Steve's photographs and thoughts echoed.

**Figure 9**

*Steve: U-Turn Canyon*





**Figure 10**

*Steve: Medieval Chamber and Morning Glory Arch*



**Figure 11**

*Steve: Tierdrop Canyon*





**Figure 12**

*Steve: Rock of Ages Canyon*



Steve spoke contemplatively about developing “a respectful relationship with the land,” bestowing “respect and reverence” for the environment; that wilderness ventures make people more “connected to the land”; and having “love” for elements of the landscape, among other associations that he feels that wilderness travel does for him. He moved to education and the importance of teaching ethical behaviors as he pondered deeply, beyond the scope of just this one experience, the technical canyoneering course, and his pictures from it. Looking back at our interview, I saw that Steve, after providing a soliloquy that had a Leopoldian quality infused throughout it, chuckled and leaned toward the camera on his screen. “[Sorry,] that was a big

ramble!” he laughed. “I just hope that you can use some of it!” I would not, in any sense, call his words a “big ramble.” I add this quote only to demonstrate the humility that he revealed, all the while speaking in academic-level terms of modern-day land management issues that are far beyond the comprehension, or even on the radar, of most wilderness voyagers. Indeed, Steve exhibited insights on these matters during our interview that left me impressed. I find it imperative to introduce Steve in this way, because to describe his perception of his wilderness immersion comes with an informed foresight that is beyond the scale of just about any student that I believe that I’ve had on a course, ever.

Steve’s background explains a bit of his acuity on these subjects, but I didn’t want the reader of this study to form a perception of him based solely on his edification. I believe that his acumen stretches beyond his education, training, and life experience, but understanding his background does shed some light on his interests. First of all, Steve was, at 35 years old, more mature than most students whom I’ve worked with on wilderness-based courses. He held a Bachelor’s degree in English, and a Master’s degree in Museum Studies. He had completed a service with AmeriCorps National Civilian Community Corps, and then an internship with a backcountry guide service in the Adirondacks. He then took a Student Conservation Association (SCA) position in Florida at a wildlife refuge with the Fish and Wildlife Service. That led him to his first National Park Service (NPS) job at Rocky Mountain National Park. For the past decade he’d been serving seasonally as a park ranger across four different parks with the NPS, Rocky Mountain, Mesa Verde, Yellowstone, and Mount Rainier National Parks. During that time period, he worked in mountain safety for Vail Resorts at Breckenridge Ski Area during the winters, where he most recently served as the manager of the Mountain Safety Program. He holds an Emergency Medical Technician (EMT) and an Intravenous Therapy (IV) certification,

and has worked several positions in both the NPS and with Vail Resorts as an EMT-IV. During the past three years, he'd also completed a field-based, 322-hour certification program through Colorado Mountain College called the Wilderness Emergency Medical Services (WEMS) program.<sup>8</sup> He had recently completed his Leave No Trace (LNT) Master Educator certification, as well.<sup>9</sup> I recall having some conversations with Steve during the course about some of the many wilderness places that he'd explored in his free time, as well, but do not remember the specifics, and failed to ask him about this during the interview. While it may seem apparent that Steve's insights are informed from an advanced level of erudition and experience, I remembered a passage from *A Sand County Almanac* that challenges the assumption that perception is formed solely through learnedness:

Let no man jump to the conclusion that Babbitt<sup>10</sup> must take his Ph.D. in ecology before he can 'see' his country. On the contrary, the Ph.D. may become as callous as an

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<sup>8</sup> For more details on the Colorado Mountain College's WEMS program, visit <https://coloradomtn.edu/programs/wilderness-ems/>

<sup>9</sup> Leave No Trace (LNT) is an ethic followed by many practitioners of wilderness travel. It involves taking only memories, or pictures, of the wilderness, and leaving as little trace of one's passing as possible. For more on LNT, visit <https://lnt.org/>

<sup>10</sup> Mr. Babbitt is a character borrowed by Leopold from Sinclair Lewis's 1922 novel, *Babbitt*. Wikipedia describes the book as "a satirical novel about American culture and society that critiques the vacuity of middle class life and the social pressure toward conformity" (Wikipedia, n.d.-a). Babbitt became a common word in American culture following the release of the novel. The Merriam-Webster Dictionary (n.d.-b) defines Babbitt as, "a person and

undertaker to the mysteries at which he officiates. Like all real treasures of the mind, perception can be split into infinitely small fractions without losing its quality. The weeds in a city lot convey the same lesson as the redwoods; the farmer may see in his cow-pasture what may not be vouchsafed to the scientist adventuring in the South Seas. Perception, in short, cannot be purchased with either learned degrees or dollars; it grows at home as well as abroad, and he who has a little may use it to as good advantage as he who has much. As a search for perception, the recreational stampede is footless and unnecessary. (Leopold, 1949, pp. 173-174)

Leopold's words rang undeniably accurate as I re-read this passage, particularly as I worked on this study and contemplated the vastly unique perspectives of the eight students who participated in the project. Steve is no different in this regard – his perception can be split into “infinitely small fractions,” of which, I admit, I will never be able to fully, or even probably marginally, comprehend. His background is impressive, however, contextually for the sake of this study; so now, with all of this in mind, I posit some intention that Steve brought to course with him.

I searched all of the eight interviews that I conducted with the research participants, and Steve was the only one who overtly admitted intention in the pictures that he submitted to me. Recall that he stated that in all of the pictures that he submitted to me, he made sure that he gave me, “pictures that had people in them...”. He spoke about this as he contemplated his Medieval Chamber photo (as seen in Figure 10); I quoted his statements as follows. He believes that since

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especially a business or professional man who conforms unthinkingly to prevailing middle-class standards” (n.p.).

people are part of the wilderness environment, he intentionally ensured that his photos (of which he knew, and I believe that he considered, would be discussed within and published as a scholarly work) are representative of that detail. As a researcher, I failed in the integrity of this work by not asking Steve one of the questions that was in my draft interview questions for the semi-structured interview. Question 3c clearly prods at intention: “Briefly explain why you took this picture”. But when I conducted the interviews, I felt bad and somewhat even irresponsible, that I was taking up these busy students’ precious time as the end of the semester and the holidays approached; and so, I trimmed down the list of questions as I went through them in order to keep the interviews to under an hour, as I’d promised them. Question 3c seemed redundant to several of the other questions, so I dropped it. As I investigated intention later, wished that I hadn’t done that, but what’s done is done. Anyway, Steve revealed his intent of inclusivity of humanity in his photos. That alone demonstrates his informed perspective. He expanded upon this sentiment, illuminating a theme that connected as a presence in his participation in the course, in the pictures that he submitted, and throughout the interview. He referred to the history of the concept of wilderness, pointing out, “subjective ideas about wilderness before [in past times], and these sorts of old-timey narratives that we had about wilderness being a place where there are no humans...” He continued, “...which is, I think...a myth.” I am nodding my head in the background of the interview at this point, admittedly taken a little off guard when students from my courses bring up these concepts without having been introduced to them, frankly, by my co-instructors and/or me. Due to the nature of the course, Hannah and I had not had the time to focus deeply on those topics in the technical canyoneering course. Steve resumed, “Native Peoples have always been on these lands, [at least] long before we were.” He revealed this multi-faceted understanding about the concept and history of

wilderness fairly early in the interview. He pointed to an idea that emerged as a recurrent premise in his contemplations. “The...ideas behind public lands, national parks, BLM is that they are...public, right?” He asserted, “Like, everybody should have access to it”. I momentarily wondered if Steve did not revel in the seclusion that can be afforded from ventures into wild places. He dispelled that question pretty quickly after the thought flashed through my head, however. The very next thing he said describes a feeling that a lot of people experience in outdoor settings. He satirically expressed that sentiment. “I’m going to get into the park, or through the park gates,” he satirically articulated, “and then you can close it behind me because this is my experience, right?” And then he grounded the satire, continuing, “So yeah, I like to I like to remind myself of this. Like, this is a place that is really meant for everybody, even though I might be annoyed by it sometimes, that I have to share, you know?” To the contrary of my brief thought, and to the inclusion of people in all of his pictures (see Figures 9-12), Steve demonstrated throughout the interview that he savored the seclusion that sometimes comes with wilderness ventures.

The data from Steve provided me with a multiplicity of intents, and therefore insights to a highly nuanced perception of wilderness immersion. While reviewing his U-Turn Canyon photo (as seen in Figure 9), he spoke wistfully of the emotions that arose. Thinking back to that moment, “It felt like we didn’t have any pressure and like we were kind of in a land beyond time,” he contemplated, “...Like, this could have been any day, of any year. It just felt kind of, yeah, I guess, you know, more of that classic ‘wilderness-y’ remoteness?” He lingered on that thought for a moment, adding, “Yeah, we weren’t under threat from any outside pressures from the civilized world”. His comments, with the photo as the backdrop, reveal that he appreciated the natural distraction from the rest of the world that was afforded by being in that place. There

are other examples of this in his narrative; and he also alluded to the allure of adventuring in wilderness-y such remote environments. I asked him what emotions or senses arose as he reviewed his Rock of Ages picture (as seen in Figure 12). “I like this picture,” he responded,

because it reminds me of *The Never Ending Story*. There’s a part in that movie where this young man, he’s...in a fantastical land, and he has to ride his horse through these big like statues, these big pillars. And it also reminded me of *Lord of the Rings* too, when they are...paddling these canoes down this river, between these two giant like, monumental statues. And so, that’s what this picture kind of reminded me of – these two tiny little adventurers like, walking through this huge canyon gateway and I kind of...feel like we were just...on this fantasy adventure in this like, fantastical faraway land.

I asked him to describe the feelings that that sense of being in such a place invoked. “[It] gives me like the feeling of escapism, like we’re on a journey, we’re on an adventure!” he proclaimed, “We’re, exploring a new land, and the excitement that comes along with it, as well as the like, the mystery that could be around the next corner.” With these and other similarly prescient observations, Steve revealed the thrill of that accompanied him during his journey through secluded stretches of desert wilderness. That excitement co-existed commensurately alongside his stated obligation to temper his enthusiasm with a sense of purpose throughout his relationship with the land.

Steve pointed to an idea that emerged as a recurrent premise in his contemplations, entertaining feelings of exhilaration, coupled with a sense of purpose. “I think it’s good to have a mix of those two, right, like the recognition that this is a, all this land is a public arena that we have a chance to share with other people, and to use to tell a story about what our values are, you know, a respectful relationship with the land.” As he reviewed his photo from U-Turn Canyon

(as seen in Figure 9), he expanded upon this thought. The picture helped him to “value remoteness,” he mused, “displacement from urban environment.” Then he flipped to another value that it had for him, describing his sentiment for the photo as focusing him, adding that the picture made him feel as if his, “mind is clear, [and that he’s] focusing more on [his] relationship to the land.” As he’d repeated the phrase a few times at this point, I asked him to describe what ‘relationship to the land’ means to him. He referred to going to, being in, and reminiscing these places as, “reminders that we’re part of it,” continuing,

And it’s...something that we have to respect and show reverence for. It’s a place that we came from, you know, [our] origins, and so I think, even though we live in this, like, modern urban civilization it’s important not to, for me to forget...where we came from, and like, how we worked our way up to where we are now.

Steve spoke so glowingly in these terms so frequently during our interview, that it was difficult to choose just a few direct quotes to highlight. His musings are reminiscent of Leopold. “It is inconceivable to me that an ethical relation to land can exist without love, respect, and admiration for land, and a high regard for its value,” he wrote. “By value, I of course mean something far broader than mere economic value; I mean value in the philosophical sense” (Leopold, 1949, p. 223).

While Leopold (1949) was concerned with the fact that diverse, wilderness areas were disappearing at an alarming rate, and with little concern to most of the public during his time, Steve fretted over a contemporary juxtaposition. In the century since Leopold was at the height of his forest service career, the United States has conserved and preserved enormous swathes of land. In 2020, land holdings shared between the BLM, the USFS, the Fish and Wildlife Service, and the NPS totaled 606.5 million acres (Congressional Research Service, 2020, p. 2). Steve was



understandably less concerned with people not caring about having wilderness landscapes, and the fact that they are being lost, because, as of the writing of this manuscript, for the most part, they aren't. Rather, he ruminated over the abuse, misuse, and overuse of wilderness areas. Those places are being, "loved to death," he stated several times during the interview. His concern stemmed from the crowds, urban sprawl placing large populations of people within short distances of otherwise once-remote locations. A population that Leopold fretted that had little education on how to treat the land still bothered Steve contemporarily. He spoke of visitors to wilderness landscapes not acting, "appropriately," "ethically," "safely," or "respectfully." He felt that the wilderness qualities of which he cherished and revered were already disappearing in some places, and in others, he foresaw the same issues occurring in the near future. He explained this posing an ethical dilemma for land managers such as himself.

Steve believed that the problem is paradoxical, and that the current trends in addressing the predicament spawns a separate dilemma. As he explained, wilderness places are being overrun. However, he deliberated, "The...ideas behind public lands, national parks, BLM, is that...[the] public, right, like everybody should have access to it." This message recurred throughout his pictures and his interview. He utilized "Arches [National Park]" and, "the areas surrounding Moab" as specific examples of places where, while everyone is entitled to access, there is a "carrying capacity" of these places that is being surpassed. There are two current trends in management to keep the visitation to these places at sustainable levels. One is to charge more money for access, and the other is to institute reservation systems. While these strategies may accomplish the goals of maintaining carrying capacities, they establish a new ethical dilemma. When "permit quotas and reservations systems are put into place," Steve ruminated, "...access to these places becomes privileged, because you have to pay an entrance fee," he continued, "or,

you have to you have to have digital access to the reservation system on Wi Fi or your phone... so, in order to protect these places from being loved to death, we're [going to] potentially create an unequal balance of who gets to access them." We conversed about this dilemma facing land managers. Steve used the word, "disparity," as being an important one for land managers to consider as they concurrently try to regulate access; and he ruminated over setting up systems of access that are "equitable." I stated, half joking, that it might be his future job to develop such an equitable system, maintaining sustainable carrying capacities in the U.S. wilderness landscapes. "Yeah, it might be my job," he swiftly replied, sincerely contemplating my query. "It might be like something that is like, impossible to do. I don't know." I believe that Steve has the qualities that render him adept enough to be the part of a team that accomplishes that feat, if anyone can; and those are the qualities, coalesced interchangeably with the intentions that he brought to our technical canyoneering course. As mentioned, I recurrently thought of Aldo Leopold as I reviewed Steve's data; his perception of wilderness experience was, like Leopold's, academic. One last recollection from my familiarity of Leopold's came to mind as I closed my review of Steve's intentions. "Husbandry," Leopold (1949) wrote, "is realized only when some art of management is applied to land by some person of perception" (p. 175).

#### **41 Seconds: Sensational Introspection**

To garner an understanding of all of the participants' perceptions, I encourage the reader of this manuscript to deeply investigate the photos that they submitted. Andrew's, in particular, tell a larger story than his interview let on. They leave the viewer with a sense of movement, of raw adventure, of situating oneself in the heart of the desert. The intention feels visceral, not in a negative sense, but in a way that makes draws the viewer into the scene of this wild environment. He didn't include any vast, primeval natural vistas, or any of culminating events. Some of his

pictures include people, and some don't. His photos illuminate the core of technical canyoneering, of being immersed in, and surrounded by actions that cannot be disassociated from the place. The environment of technical canyons is such that our kinesthetic senses are firing in multitudinous ways, through countless circumstances, nearly constantly throughout the days. Andrew detailed this as well as anyone could in four photographs (see Figures 13-16).

**Figure 13**

*Andrew U-Turn Canyon*



**Figure 14**

*Andrew: Medieval Chamber and Morning Glory Arch*





**Figure 15**

*Andrew: Tierdrop Canyon*





**Figure 16**

*Andrew: Rock of Ages Canyon*



Andrew's Day 3 photo (as seen see Figure 15) is of a person, a canyoneer, rappelling down a rope. He is silhouetted in the center of the scene backdropped by a deep blue desert sky. His legs hang wildly wide, the rappel rope clutched in both his (lower, rappellers right)<sup>11</sup> brake hand, and also in his (upper, rappellers left) VT hand.<sup>12</sup> It is marginally detectable in the photo, but the other rope, the pull cord,<sup>13</sup> dangles freely behind and to the left of the canyoneer. The desert scene surrounds him. Another person, the one running his fireman's belay, watches him from the ground, about 30 feet below. Later on, in their interviews, every student on the course referred to the events that transpired in the few seconds following this picture being snapped.

What you cannot see here is that the picture is of Andrew, and that's he's falling increasingly rapidly towards the ground. Before I explain any further, I want to claim full responsibility for what happened next. Andrew took this course with Hannah and I as his

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<sup>11</sup> When referring to a scene in canyoneering, and in many outdoor activities, we speak or write in terms of right, left, front, back, above, and below the participant, not the viewer. Throughout this manuscript, note that I refer to the pictures in this manner.

<sup>12</sup> See the previous section, Visual Representations of the Desert, Steve H., for a refresher on the rappelling setup and the VT hitch.

<sup>13</sup> The pull cord is a way that we sometimes employ when the pitch that we rappel is more than one-half rope length. If the rappel is less than one-half rope length, we can double the rope over, bight it at the middle point, attach that section to the anchor loops, and rappel down both strands of rope. When the rappel is more than one-half a rope length, we rappel on one strand of the full-thickness rope, and employ a smaller strand of rope (the pull cord) to pull the thicker rope back through after everyone has rappelled.

instructors; and therefore, we are accountable for the near miss<sup>14</sup> that I'm about to describe. It was our fault, and I will attempt to demonstrate that as I explain the incident. As I explained in *Visual Representations of the Desert*, we rappelled with three measures of safety during this course. First, we have the rappel rope, either one or two strands depending on the situation, running through the rappel device. The rappeler controls her descent speed by adding more or less friction to pass across the rappel device as she lowers herself down the rope. This is, in theory, enough of a measure of safety to ensure the rappeler's safe descent. It is a failsafe system, unless it is not stressed to the rappeler to maintain vigilance on setting up the proper amount of friction for the particular rappel, the number of strands (one or two, in most cases) that he is rappelling on, the thickness of the rope, the direction of the rappel device, and other slight considerations. Many organizations, in fact, like military, paramilitary, law enforcement, and many rescue operations perform their duties that involve rappelling utilizing only the rappel device, with no backups. As we were engaged in an educational setting, however, we went further, providing a triply redundant rappel system for every rappeler on every rappel in the course. The second measure of safety that we utilized was the auto-block, or in the case of most of our rappels on this course, a VT hitch. In the case that the rappeler loses control of their descent speed from the rappel device, the VT engages, snagging the rope above (or below, depending on how it's set up; most of ours on this course were set up above) the rappeler, stopping their descent. If it is tied correctly, it is failsafe, unless it is not vehemently stressed to the rappeler that he must drop his pinch with his non-rappel hand on that part of the system in the

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<sup>14</sup> Near miss is the phrase for an incident that occurs during an endeavor where errors occurred but that turned out with little or no harm or damage to persons or equipment.



case of an unexpected acceleration of descent. If he both loses control of his rappel speed through the rappel device and does not drop his grip on the VT, we have a third measure of terminating the descent, the fireman's belay. The fireman's belay is a way in which the rappeler can be caught, and even rappelled, by a person manipulating the rappel rope from the ground. She simply pulls the rope taught towards the ground, and given that the belay device is loaded correctly, the directional friction through the device will stop the rappeler. Applying less downward force will allow the rappeler to slide down the rope. Again, the fireman's belay is failsafe unless the participant who is attending to it doesn't realize that the rappeler is in an uncontrolled descent and therefore doesn't pull downward when that circumstance occurs. We instructors unintentionally, but unquestionably, compromised this scene by allowing a situation to occur where all three of these "failsafe's" failed.

Andrew hit the ground at a rapid rate of speed. He reported, and others confirmed, that he landed in fairly soft sand, on his butt. Miraculously, and thank goodness, he was not injured. At this point, he had not been fully vetted by Hannah and I at rappelling on a single-strand rappel line. On top of that, the rappel was overhanging, thereby allowing the full weight of the rappellers to hang on the line, necessitating greater amounts of friction than in most previous rappels we'd accomplished. We, the instructors, did not stress the importance of adding more friction to the system until the participants were fully trained and comfortable in those increasingly risky situations. We did not desperately stress the vital importance of having the students completely remove their VT hand away from the system in the case of an unanticipated acceleration; and, we did not desperately stress the crucial last-line-of-defense role of the person overseeing the fireman's belay. And so, Andrew made an overly speedy descent, landing on the ground, on his butt, in the sand.

I asked him to describe the senses that he felt after he landed. “Smell,” he quickly replied. “I can smell the rope, because it got hot. It produces a nylon kind of smell, just from rubbing on the leather gloves.” He continued on, “So when I got down and I was just sitting there I could smell that; and then I could feel the dirt around me that I had landed in, which was dirt thankfully because everywhere else was rock.” Having an experience like Andrew’s fall would rattle just about anyone, especially in this environment. Andrew, however, had arrived at the course with a sense of sensational inquiry. He wanted to know more about the environment, and the activities involved in technical canyoneering, which sometimes seem interchangeable. We technical canyoneer to get to the environment; while the environment provides the venue for technical canyoneering. This is what I learned most from Andrew. His intention was to truly soak up an interchangeable amalgamation of everything involved in his wilderness immersion.

Fortunately, by the time that Andrew had lost the fight with controlling the friction being applied through the rappel device, he was, at the most, only a couple dozen feet above the ground. His hand does not seem to have left the pinch position of his VT hitch. He called for a fireman’s stop to be applied by the person on the ground by yelling, urgently, “FIREMAN’S!” The fireman’s stop was not applied, probably due to the surprised bewilderment of the participant at the bottom being put in the situation of suddenly having to save someone’s life without suitable preparation for that moment when it occurred. There was still some friction being applied as the rope began to rapidly slide through his belay device, and likely a little also being harnessed through the action of the rope slipping through the loose VT hitch. These two applications of slight friction helped ease his increasingly rapid descent in the final dozen feet of his descent. And as he recounted, Andrew landed on one of the few soft spots of dirt in the entire

area. It was the saving grace at the bottom of a triply redundant amalgamation of errors, again, not at the intent, but at the fault of the instructors.

Andrew walked away, “not getting,” as he said it, “super-hurt.” The picture, more so than the incident, brought back excitement as he viewed it later more so than fear, recalling that it was the first big overhanging rappel that everyone encountered on the trip. He also felt that viewing the picture weeks later reminded him that they (the entire group) were broadening their skillset by flying freely through the air, unable to reach the sandstone face of the cliff with their feet, like in previous rappels. Andrew’s interview responses, like his pictures, always point to the tactile experience of his time in the canyons. When speaking of his Day 1 picture (as seen in Figure 13), he articulated that when viewing it, he thought of “texture” as a sensation, “the exposure,” he expressed, “the physical being” in that challenging place, “work, and getting all sweaty.” His images are austere in the sense that they all invoke a quality of proprioception and/or sensation. He was excited as he spoke more of the picture, thinking back to that moment of that day. “Yes!” he recounted, almost seeming to want to be back in that moment, “feeling the rock, feeling the environment beneath my feet.” I asked him to explain what he’d meant by categorizing texture as a sensation. “Well,” he conveyed, “It’s sandstone, so it kind of rubs away with every touch. So, it’s like, sweaty hands, you stick it on the rock, your hands would get all like, grimy, and then we would rub away, or we’d have to clean a couple of the holes, so we get a better grasp, so we don’t fall.”

Andrew demonstrated recurrently that the act, the exertion of being in the desert, and feeling the desert as he moved through it allowed the experience of the activity of technical canyoneering to happen. The two entities, the activity of technical canyoneering, and the

technical canyon environment itself are so inseparable to him that it was hard for him to articulate it into words during the interview.

I believe that, during the interview, he was trying to find a way to put his relationship with the canyon into words; and he is so introspective about his experience that it was difficult. At one point, as he contemplated his Day 2 picture (as seen in Figure 14) during the interview, 41 seconds passed by in silence. It became a bit awkward, but I wanted to allow him the time to process. “I’m not sure...” he trailed at second 42. “It seems like you’re contemplating it but you can’t put it into words,” I prompted. “Yeah exactly. I’m just not sure how to start,” he said. It seemed that he was thinking so deeply about the tangible, bygone experience, and the interchangeability of the wilderness canyon environment, and placing oneself there through technical canyoneering, that he needed more time – more time than an interview allows – to explain the beauty of it all to him. Andrew’s Medieval Chamber picture (as seen in Figure 14) reminded him of “having soggy feet,” another reference to sensation. He continued on from that, recalling the smell of the Medieval Chamber. “It smelled like a pothole,” he said, “kind of yucky, old water, with some leaves floating around; it was cold to very chilly water.” Here, in a mere seventeen words, he intricately detailed the feeling of three senses – smell, sight, and touch. His sentiment could potentially indicate an aversion to the setting, but this was not the case. He amalgamated these as an overall sensation, continuing, “and then the feeling of it was just awesome. Drop into that little hole and then hopping out of the crack. Just makes you feel so tiny when you’re standing up just in this massive rock feature.”

I went back to the 41 second pause. Andrew had indicated that he couldn’t find a way to begin explaining his thoughts. “That’s okay,” I reassured him, “Let’s move on to the next picture and we’ll continue on with where you left off.” Before flipping to the Day 3 picture (as seen in

Figure 15), however, I asked the final question that I asked for every picture, “Do you have anything else you want to add about this picture before we move on?” And yes, there was. “This was probably my favorite day,” he started. And for nearly two minutes, a lot of time in my interview world for this project, Andrew detailed his feelings about the canyon that day. His revelation included everything from stemming through sections of the canyon, to encountering “little village looking plots” of cryptobiotic soil, to “reckless people” disrespecting the desert environment. An amalgamation of sensation and introspection. As I reviewed this section of the interview, coupled with Andrew’s picture of himself standing with soggy feet in a cold, his gaze cast downward at a grimy pool of circling dead leaves, in a wet cave that smelled like a pothole, I was inspired by his attraction to raw sensation, and to introspection, two qualities, thinking about it as I describe his data, that my own persona lacks. Before I reviewed the section of his interview that is directed at the fourth photo (see Figure 16), I chose to experiment. I focused on the picture and viewed it through a lens of sensation and introspection.

There are a few intriguingly unique photos that were submitted to me by the students, like Jay’s picture of plants and his own shadow (see Figure 8); this one from Andrew is another such picture (see Figure 16). I think that most viewers of photos would take a quick look at this photo and baffled, move on the next one. It is rock, jumbled sandstone cliff, mixed in shades of red, white, darker and lighter spots; loose looking formations and flakes, and loose chunks of boulders and rocks in sand, with a few indiscernible plants poking through. Untrained, or at a quick glance, one might wonder if the angle is up or down, or sideways even. It might challenge a viewer to look at it initially, like the brain recoils from trying to process the scene. But after a while, it comes into focus. This is a slot canyon, and it’s looking down from near the top of a

Class 4 scramble.<sup>15</sup> Here, Andrew is looking down at what he just came up. It depicts effort, the physical exertion of moving up. We were breathing heavy here, using both hands and feet, pulling through sections like rock climbers, testing chunks and flakes as hold by giving them a pull prior to weighting them, in case they were loose. We were helmeted, sweating, even though the section is narrow and shaded, at once hot from the exertion and also cool as the shaded cave-like air breezes our bare necks, faces, and hands. Andrew took great care as he navigated this section not to fall, not to dislodge a precariously wedged chunk of sandstone and abruptly loose a toehold or a finger pinch; not to drop a piece onto his tibia; not to send it plunging down the chasm, endangering travelers below. The desert bushes are dried and thorny; he also took care not to brush against them, to avoid the rash of small paper-cut-like irritations, ripped clothing, a scratched eye. One cannot see the bottom of this abyss from the photo; it took many minutes to navigate this chimney to the top; and this was one of three this day that we ascended. The photo embodies effort, exertion, toil to be in this place; there is no reward of desert beauty without work, without knowledge, skill, and application of it all.

This is the beauty of Andrew's perception of the place. In other participants' pictures, we have the beautiful vistas, the comradery, the wonder and the excitement; in Andrew's we have the desert's core, the true unyielding struggle that it takes to survive in this place for periods of time. He depicts the pain. I thought of times throughout my career when I'd been in these places having run out of water, when it was 115 degrees for days, when the water that we'd run out of

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<sup>15</sup> Moving across outdoor surfaces are categorized into Class 1-5, 1 being the easiest, flat ground, and 5 being the hardest, sheer vertical or even overhanging cliff. Class 4 terrain is challenging, the level just before most travelers require roped protection.

was sucked from small puddles full of frog urine and teeming with tadpoles, stinking to the smell and disinfected through droplets of iodine and soaked in plastic bottles. I thought of when it precipitated here in the spring, when it snowed a wet heavy snow/sleet mix for days, soaking us and chilling to the bone, not sleeping for days, wrapped up humbly through the nights in half-wet sleeping bags, shivering and wondering about the feeling of hypothermic death. Andrew would thrive in those situations, I believe; to be able to feel the depths of what the desert has to offer. When I mentioned that Andrew demonstrates a desire for raw sensation, and that I generally do not, this is what I mean. I do it for different reasons, and take the relentless raw sensation – the good, the bad, and the ugly – as those sensations transpire; I sensed that Andrew craved more of that, like he yearned to be a part of the place for the sake of its ferocity. But not in an egotistical or machismo way, like some that I've seen. Quite the opposite, indeed. His intention is about introspection, like he demonstrated a love for the intense naturalistic sensations that the desert dishes out in order to build upon an understanding with its nature, its miracle of being. Again, it's not something that I'm good at, introspection. If there were any section of this dissertation that I wished could be composed by someone else, it was a description of Andrew's thoughts by him, the 41 seconds.

### **It Can Be the Smallest Things, Too**

It is worth mentioning, or rather essential actually, that I describe how I reviewed the data that the participants provided me with for this dissertation. I viewed and pondered, assessed and analyzed the pictures, one by one, for tens of minutes, even hours for some of them, trying to glean insight about their perceptions of the desert wilderness based on those images that they offered me. I then moved to the interviews. Eight of them, all but Andrew's, were recorded on Zoom. For Andrew's, I only had an audio recording of it, no video. I had audio recording and

draft transcripts from my subscription to a transcription service (otter.ai), of all eight of them. Sometimes I simultaneously edited the transcripts as I viewed or listened to the interviews. Other times I watched the interviews, focusing on the pictures that gleamed on the screen in front of the two of us during the interview as the students narrated through the photos in response to my questions; and sometimes I directed my attention to their gestures and expressions as they spoke. I beat myself up over missed opportunities at follow-up questions that would during the description phase come in so incredibly handy in many instances; but I had to chalk that up to my own status to learning as a new researcher. I was able to come to, at least what I thought were, some reasonable patterns of engagement with the course and the wilderness immersion out of the pictures and the interviews after engaging with the material in usually just a few days for each participant which led me to the composition of the sections of data analysis that I've included with this manuscript. One participant, however, demonstrated such a complex relationship with the experience of the course and the setting, that it took me more time with her pictures (see Figures 17-20), more ways of re-viewing her interview, and also thinking back to her interactions during the course, than any of the other students.



**Figure 17**

*Dane: U-Turn Canyon*



**Figure 18**

*Dane: Medieval Chamber and Morning Glory Arch*



**Figure 19**

*Dane: Tierdrop Canyon*





**Figure 20**

*Dane: Rock of Ages Canyon*



While I struggled with what I registered as complexity, however, was being described by Dane as simplicity. I had worked with Dane during two previous courses, an online history course during the Covid-19 pandemic times, and later, a Wilderness First Responder course, 30 hours of which was completed online, and 45 hours were in person, in a camp/field setting. She was 19 years old, and was a joy to work with as a student. I cannot stress how much I'd come to respect her prior to the technical canyoneering course for her quick intelligence and application; her tenacious motivation; her outstanding attitude; her respectful and pleasant conduct; her cheerfulness; and her admirable participation and engagement with the courses. Thinking back to her participation in the technical canyoneering course as I reviewed her data, all of the same qualities shone through. Dane did not describe herself in the same ways as I had found her to be, however. In the course and in other aspects of life, she described herself as lacking confidence. It was difficult for me to amalgamate these two sides that I came to know of her, one from all of my previous interactions with her, and another from her own descriptions of her pictures, and through those, her perceptions of her desert immersion. I knew a bright, talented woman who excelled at everything that I'd seen her take on; and I want to stress the descriptor excelled as I describe my teacher/student interactions with her. I offer this background and description in order to preempt what I believe I eventually came to the realization of as I processed and re-processed her data. Dane entered into the course with the other nine of us in order to challenge herself. Her primary intention was to experience the setting with simplicity, a mix of challenge and exploration.

While it may be tempting to assume that most students in a course like technical canyoneering in the desert canyons of which these participants were immersed are focused on challenge and exploration, the data showed that not all of the participants intentions were such. It

came to light from the data that not all of the participants' primary intention was challenge and exploration. I think that challenge and exploration were a byproduct, or in other cases, an intention lower down in their subconsciousness's. While most students almost assuredly entered into wilderness forays with multitudinous conscious and subconscious intentions, and depending on the setting or the activity involved, her intentions likely shift in value. The participants' in this study brought to the course with them intentions that demonstrate the scope, scale, and complexity of intention. Every individual in this course entered into the course and its wilderness venue with a multifariousness of intent that cannot go understated, both in its simple presence, and also its effect on how each student chose to perceive their experience in the course. This document does not focus on all of each of the students' intentions, rather, it focuses on how some overarching intentionality brought to the course by each student affected their perception of their experience. Somewhere on everyone's conscious or subconscious list of intentions, I would proffer, lies challenge and exploration. I would also submit that on everyone's register is some form, however vague, of every other predominant intention that I describe in this manuscript. Dane demonstrated in her pictures and in her interview an intentionality of simplicity. Analyzing her data for days, I overlooked it repeatedly; but when I finally saw it, it shone through like sunlight. In Dane's Day 3 picture (see Figure 19), sun dominates the scene. Not only is the entire orbit of the near to set autumn sun featured in the photo, a brilliant halo lusters across the surface of the picture, highlighted with dominant, thick sunbeams extending diagonally upward and downward to the right and left across the page. Smaller and softer rays send off a softer glow in nearly all directions, extending outward from the blazing, ebbing orb at the center. A few greenish and blueish sun spots, or 'lens flares,' the disdain of elite photographers everywhere, dazzle in the frame, resembling diminutive alien ships caught off-

guard in the snap. Everything else is muffled under the power of the sun in the picture. A nearly indeterminate participant rests behind the patina, and the desert scene all around is brilliantly immersed in the sun's intensity. I asked Dane my standard lead-in question for the photo, her reason for taking this picture. Specifically, for this one, I asked, "What inspired you to take this picture or to submit it to this research project? Her answer is profound in terms of getting to the heart of her intention. "I didn't take a lot of pictures that day, but this one I felt like I should post," she responded.

It just includes one of my classmates but he's taking a picture of the view on the other side, which is also an amazing view and I don't know I suppose I like to catch like, more simpler moments in life. Sometimes it's like pictures doesn't always have to be that giant, broad scale stuff. It [can] be the smallest things, too.

Indeed, the classmate she mentioned in the picture offered me a grandiose down-valley view, from this exact location, as his submission for this project; and three participants more submitted pictures from this general location. Dane's was the only one even close to this angle, however.

Gazing upon Dane's Day 3 picture (see Figure 19) and reading these words, I thought of my mom. I lost my mom, my longest and most unconditional friend, as I struggled to complete this dissertation. If you were to look up the completion date of my doctoral work and the publication date of this dissertation, you will come to some quick understanding of what I mean about how profoundly that loss, and a few others mixed into the same timeline, affected me, and hence, my research timeline. I'll leave that at that. It is worth explaining, however, how my mom viewed the world. She was raised in a simple place, in simple times, the Appalachian Mountains during the 1950s and early 1960s. She was assuredly not fully out of her upbringing when I was

borne to her at twenty; my brother came along four years later. We were the light of her life; and while we both traveled, earned degrees, took risks beyond comprehension to her, she never lost touch with her roots. She was simple. She liked the simple things in life. She was selfless, sweet, kind, caring, loving, humble. She didn't have, or want, or need money or material things to be happy. And as I thought of her in composition of this dissertation, the one that she will never read or feel the pride of having a son who achieved the status as a doctor, I feel her pride nonetheless. And in Dane's pictures, and in her words, I saw the beautiful simplicity of my mom.

Dane approached this course with the delightful elegance of simplicity. She did not submit grandiose, or austere, or embellished, or overly intentional scenes. Nothing was of herself; her pictures are selfless. In fact, she demonstrated that as she continued to describe her Day 3 photo (see Figure 19). I asked her, what emotions or feelings the picture invoked as she viewed it during the interview. Dane replied, "A bit of happiness but also a bit of sadness, because, I really, it kind of reminds me of the whole group we went out with," a selfless response; it is impossible to explain how much this humility resonates of my mom's self-abnegation. But that's actually what Dane said, continuing, "they were an awesome group and such, and it makes me happy that I got to meet all these people, but also sad because I don't know I'll meet them again or that kind of thing." I'm going to table the portrayal of my mom now, as this is about Dane's experience. My mom would have never signed up for a technical canyoneering course, to be clear, to begin with. I hope that the explanation of how memories, however, and parallels, helped me to make the breakthrough of discovery about the intention of Dane.

It is important to develop in this narrative a portrait of the data, which for the most part, includes the pictures submitted by the students and the interviews that I conducted with each of



them; but before moving on to expound upon all of Dane's data, as it were, it is important to share a particular comment that she made during her interview. It was the last statement that she made. I asked her my standard final question, "Is there anything else you would like to add about any of the pictures before we [wrap-up]?" She paused. "Um," she pondered. Paused—eight seconds in total. Then she added, "I'd just like to say that the pictures aren't always all encompassing for my thoughts and feelings... If I do something and I remember it, it's because it was an amazing thing and I will remember it forever without pictures." I agreed with her, noting that I'd take that seriously; and the interview was over. This divulgence by Dane requires utmost attention and courtesy. I pondered the comment for weeks, months. This was the last declaration that she made, her final contribution to the research, in the interview. Glad that she'd felt the confidence, and comfortable enough with me to make this declaration, I thought about her as I contemplated the statement; I thought of the other students in context.

I thought through both parts of her comment. Here is my rationalization for each. The pictures that the participants submitted do not embody their experiences. I quote myself in response to Dane, "I...use the pictures in this research project as prompts for your [the students'] memories that are greater within." It cannot be expected that four pictures can embody an experience of four days. Or a million pictures, for that matter. It has been incredible to witness patterns develop from the four pictures that each of them submitted, however; and they serve as prompts to insights, as well as they served as prompts for discussion with each of the students. Part two, "If I do something and I remember it, it's because it was an amazing thing and I will remember it forever without pictures." This statement resonated with me as it demonstrated that Dane thought of her course, her wilderness experience, as an amazing thing, a life event that she intends to remember in perpetuity. I wondered how many college students think of, or describe,

courses that they take in this manner. As a teacher, this part of her statement rendered a sense of humility, of thankfulness, that we are so fortunate to have these opportunities to craft courses like technical canyoneering, in the venues of the fantastic Colorado Plateau. For the sake of this document, however, as a researcher, it allowed me to garner more insights about perception.

Dane told me a lot about perspective, a cousin (or at least a twice-removed synonym) of perception. She spoke of visiting and seeing many places and their associated outdoor landscapes, but never from the perspective of the wilderness. She explained her reason for choosing her first picture (see Figure 17), a vast aerial perspective of Arches National Park. “‘ve been to Arches lots of times,” she recounted, “and that’s why I took this picture; it was a new perspective being up so high as opposed to on the level below the arches.” I asked her what she thought of the altered, the wilderness, perspective. “I definitely enjoyed it a lot more,” she responded. “It gave [me] a new perspective, away from the crowds and such.” She said that looking at the picture during our interview gave her a feeling of “quiet wonder,” recounting that the view in the photo is only a glimpse of everything that surrounded her in that moment. She expanded upon that sentiment, noting that she’d visited a lot of places with her family in her past; but that this perspective gave her the feeling that there are “so many places” that she still hadn’t seen, “like the La Sals,” for one. The La Sals are the mountain range just out of view in her picture, roughly a scant 20 miles from her location in Arches that day. The range could be seen protruding in the background for many hours that day as we dropped from ledge to ledge down Tierdrop Canyon. Several students described the landscape as feeling surreal, with 12,000’ snowcapped peaks jutting out of aspen forest; the Colorado River valley snaking through the bottom of every view that they experienced in Arches; and the otherworldly landscape of the

technical canyons literally at their fingertips. Dane's descriptions of her pictures went from the broadscale to the miniscule, and even to the spiritual.

Speaking of her time in Medieval Chamber, Dane depicted how the scene reminded her of a piece of artwork. Replaying the interview recording, I could see in her body language and in the way that she spoke the excitement that she felt. "This picture's definitely my favorite," she began. The picture (see Figure 18), she recounted,

gets the art side of my brain really excited just because of all the contrast between like, the super bright sky above and the super dark shadows within the canyon. I's just super awesome feeling of being down there looking up; and you know the pool is there but you can't see it in the picture, and then the rope, kind of like, adds to that contrast. I don't know, there are a lot of excited and inspired emotions.

I asked her if she could expand upon her description of the artistic qualities of the scene. "I's not just like, random jaggedness, she continued, "It feels like [because of the way that nature has shaped the canyon,] it just has this beautiful form to it." She awed at how the canyon had developed into this mysterious and awe-inspiring shape with the assistance of erosion. I asked her the value of feeling emotional about that place. "It just brings joy, I suppose which isn't always," she trailed. "Joy is sometimes hard to come about. Then there's this like, simple, beautiful landmark out in the middle of the desert!" I continued to inquire why she felt that this was valuable.

During our interview, Dane twice mentioned her spirituality and how the desert environment had stimulated it. As her creativity had been aroused when thinking of her experience in Medieval Chamber, I continued to dig deeper in my questioning. What do these venues, asked, do for you beyond the sensory perception of them? What do these places do for

you as a person as you think about your own knowledge, intellect, artistic side, or spirituality? She cleared her throat, pausing, and then straightforwardly divulged a very personal affirmation. “It just kind of like leaves me in awe of the Lord’s creation,” she said, pausing again. “It just like, invokes a sense of His being and His power, I guess, and that [I feel] fortunate, fortunate enough to experience it.” In its simplicity, this was a lovely, heartfelt, and candid expression of the connectedness that she’d developed with the landscape during her four days in the desert. Among Dane’s final thoughts were that the time she’d spent inspired her to seek activities in wilderness places that brought her joy and pride, again, two feelings that she admitted to being challenged, at times, at finding. Even as I wrote this, that still perplexed me; again, from my experiences with her, Dane was not a person that I found to have any reason to feel a lack of joy or pride. That is why her case, and discovering her intentionality, initially felt challenging to me. “The peace and joy I get out of going out into nature and pushing myself past my comfort zone,” she confessed in her closing thoughts, laughing as she concluded, “is always something that I tend to enjoy looking back on it later.”

I looked once more at her final photo (see Figure 20), the only one that hadn’t been discussed in this manuscript in detail. It is of her classmate Andrew, crawling through a shadowy snaking side canyon, illuminated up top by distant fiery sunlit domes. As we looked at the picture together, I asked her if she could relate her experience in that place to having a newfound sense of, in her own words, joy and pride. She paused, and then began, “I would say so,” she paused again, and then concluded. “For me, it’s always, I’m a slow learner when it comes to life, stuff like that. But being out in the wilderness for four days can definitely push you forward in ways you don’t expect.” And from Dane we can learn that understanding can come in the form of the smallest things, too.

## **Bite of a Pickle**

Jon Buck serenaded the group every day on course. At the funniest times, in the most magnificent venues imaginable for a concert, we'd hear Jon crooning some decades-old 'outlaw country' tune, or a funny 80s hair band ballad, or refrains from more well-known gangster rap. Sometime on Day 2 he started taking requests. Sometimes this kind of enthusiasm bugs me on course, like, when we're trying to set up the anchors on a precarious edge, trying to keep track of everyone and teach at the same time; or, when the sublime of the scene cannot be outdone by human sounds; but Jon's diversions were appropriate. He never went on for too long; he was judicious in his timing and song choices; there was no negativity, no overly foul language, or inappropriateness in the ballads that he chose. It almost came as an afterthought to me as I began to scribe the tale of his intention.

Spirited enthusiasm filled Jon's presence. He nearly always wears a grand smile. He always stepped forward to ask how he could help. If we solicited volunteers, Jon likewise always came forward. He'd often look side to side before offering and say something like, "If someone else wants to, please let them, but I'm happy to do it!" If someone else gave the slightest indication that they might want to take on the challenge, he'd enthusiastically encourage them to take the spotlight. He listened eagerly and he learned intently. Having nearly completed his bachelor's degree in business, and minoring in Outdoor Education, he came into the course with a great deal of backcountry, wilderness-based skill; but he'd not done technical ropework, rappelling, or climbing. His desert ventures had been confined to the car-camping spots and the increasingly ubiquitous four-wheel drive trails across the Colorado Plateau. Having worked on courses with Jon Buck before, I'd come to greatly appreciate it when I saw his name on the roster prior to a course start. He was strong, good-natured, reliable, and had a focus on learning

that was infectious. His goal, at 20, was to be a backcountry snowboarding guide, so he focused intently on soaking up everything about all of the skills that we worked on in the course.

While he enthusiastically learned all that he could about technical canyoneering skills, however, he did not primarily represent skill-building in the pictures that Jon submitted for this project, or predominantly talked about in his interview. Viewing Jon Buck's pictures (see Figures 21-24), you can see that all of them have at least one person, one is of the whole group, and one has two people, one sliding over the top of a rappel, and one providing the fireman's belay at the bottom of the cliff. As I reviewed his interview, I started taking note of his intention, and a theme emerged. Jon came to the course and to its wilderness venue seeking to learn more about himself; and how to be a better person. "I think that's one of the biggest things that kind of comes with an outdoor class is that, yeah," he declared, "you're learning a lot about what's around you, but you're also learning a lot about what's inside of you, and what you're made of." I started to do a count in Jon's interview of how many times he said something to the effect of statements that he made that had to do with growing as a person such as searching, "for who you want to be in life...", discovering, "what's inside of you...", being, "on the right path in life...", and, "in tune with my emotions...", taking care to, "eat healthy and take care of your body to be able to keep on doing all this crazy stuff ...," and using these adventures to, "find out what you're made of...", and the like; but found that the comments were so ubiquitous that it would be painstaking to count them all. I convey the message here, though, to demonstrate Jon's intentionality with his wilderness immersion. He is forthright in that he strives to be a better person, inside and out. A better communicator; more caring; more thoughtful; more technically skilled; physically stronger; healthier; more experienced; and more capable. All in all, he trusts that an enhancement these traits combine to allow him to continue the journey of discovery

through ventures into deeper and deeper, more intense wilderness venues, all for more of the same – the quest to be a better person. Jon’s intentionality was the most forthright of the eight participants; he is extroverted, and so getting him to converse, and in turn tell me, everything that he was thinking and feeling was more straightforward than with some of the others.

Jon was amazed at the fact that he was able to even participate in ventures like the technical canyoneering course. “I grew up down in Denver, Colorado, in a suburban city, and went to a high school of probably 800 people in my class,” he detailed, “and had never ever even thought about doing [wilderness-based adventures] growing up”. An unexpected and miraculous good fortune had fallen upon him with the discovery of wilderness adventuring, and when he arrived in the desert, he strove to thrive within the venue through an arrangement of utilizing all of the skills that he had attained thus far; and if he didn’t yet possess technical skills, he practiced skills that he could count on. His Day 1 picture (see Figure 21) does not include a panoramic vista, as most of the other Day 1 pictures submitted do (only Andrew’s also does not); but rather, it is a short-range backside view of me, the last one to rap down the first rappel of U-Turn Canyon, i.e., the first rappel of the trip. I’d cleaned the anchors and was descending, Jon Buck providing my fireman’s belay. He described his feelings at this moment of having completed the rappel:

And this was a little bit more emotional for me, just because this was kind of like my first big rappel. On my own. I mean I've done a couple rappels but they were always like someone else is tying you in and you're basically just walking down the rope [on a belay that someone else controls], but this was like my big first learning lesson and it went really smooth. So, I was really happy in that moment.

**Figure 21**

*Jon Buck: U-Turn Canyon*





Jon was on the way to, and excited about, possessing the skills of being a more experienced rappeler, and canyoneer; but this was fresh into the journey. He had just practiced the new technical skills of attaching to a fixed line and approaching the rap anchors, threading the rappel rope into his harness system, tying and clipping into his VT, and then safely gliding down the rope using the system without a call for his fireman's belay from below. Four days – and eleven rappels – later he'd begin to feel much more accomplished in those skills; but at the moment that he snapped this photo, he'd just done it for the first time; so, he turned to other ways that he could contribute. Jon explained why he took the picture:

[I knew that] you still have to take care of the rappel we just did, given that people were still up there. So, I took a picture of you...and made sure that you were all right, made sure that no one got left behind, and we had all of our equipment with us

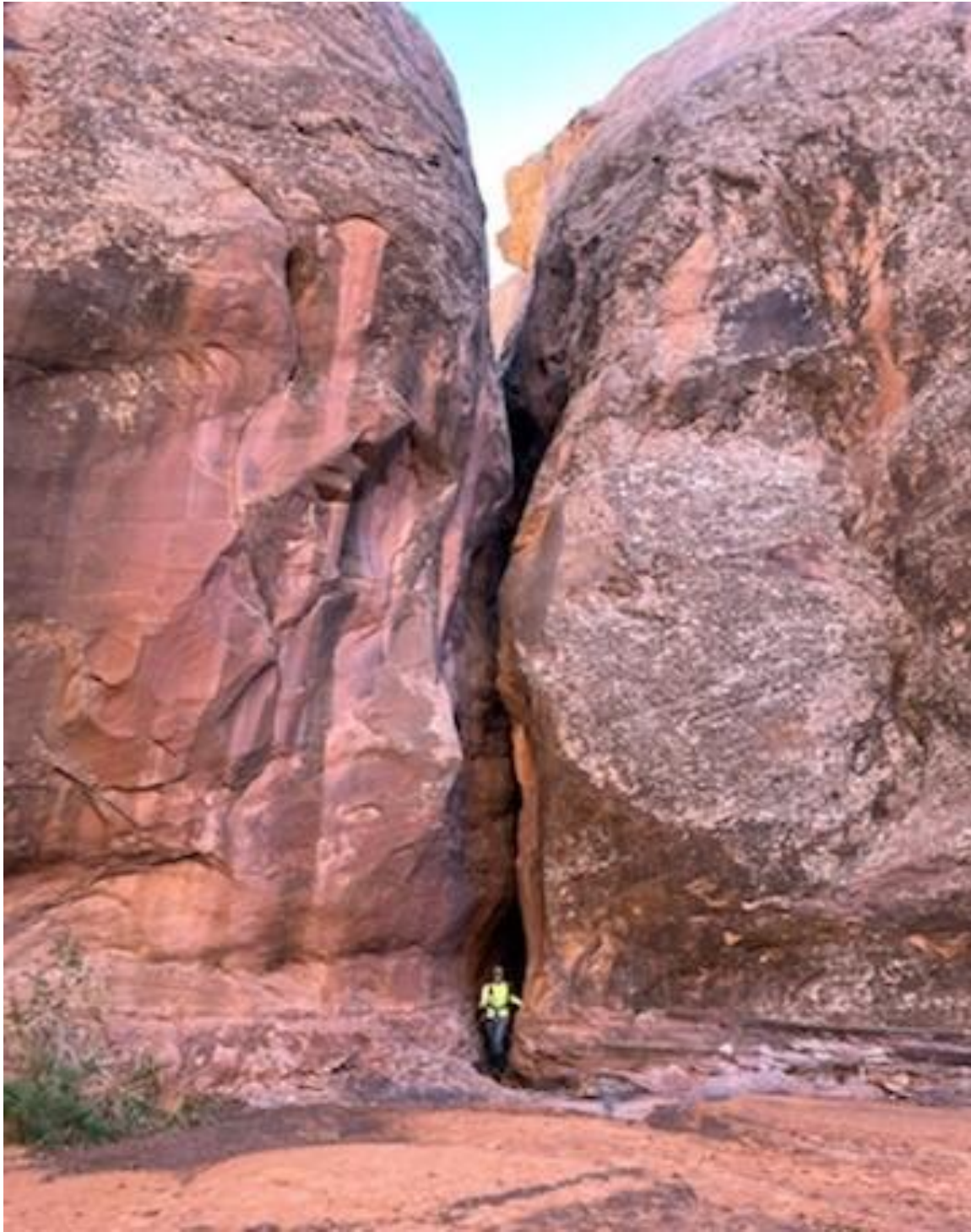
As he was just easing into the technical skills, he trusted his intuition and previous learning that in a wilderness environment, it's all for one and one for all. We entirely wrap up one component or section before moving on the next. He was right; and he shone on the screen as he reminisced about ways to be helpful in that moment. By Day 2, rappel five, he was feeling jazzed about the technical skills that he was learning; and how he could put them to use in order to be a better person.

All of the participants marveled at the massive scale of the wilderness desert environment at some point during their interviews; and Jon was no different. His Day 2 picture is of June standing at the exit from the Medieval Chamber, which we'd rappelled into (see Figure 22). The exit appears as the embrace of two immense monoliths of sandstone, a shadowy, snaked but roughly vertical, crack dividing the two mammoths between right and left. A tiny fluorescent yellow figure punctuates the scene, June, standing at exactly the exit point from the musty

cavern. “I took a...picture of June walking out of [the chamber], he recounted; “and then I took a good one of just the rocks.” He continued to explain, “It's really crazy to flip through both of those pictures, because you look at the one without Maggie in it and you just think, wow, those are some cool rocks; [but] then you put Maggie into the perspective and you're like, oh my God, those rocks are absolutely massive!” Jon expressed a range of emotions surrounding his reflection on Medieval Chamber, including the scale and power of Mother Nature and his minuteness within that; life and death; his connectedness with the Earth; the breathtaking vista over the next arch downcanyon from where he took the picture; and the smells of the dank chamber, which he described as smelling like “mucky water and dirt, and rock,” and then added, “but for some reason it's amazing; like, I would buy a candle that smells like that!”. He also described the shrieks and laughs of his classmates as they descended one by one, on rappel through the pool in the middle of the rappel. With all of that, I asked him one of my standard scripted questions for all of the pictures, for all of the participants, what emotions or feelings does this picture evoke as you look at it now? The picture gleaned on the screen in front of us. June, a fluid fluorescent fleck, bilaterally flanked by brawny megaliths. “Definitely accomplishment,” beamed Jon. He spoke of feeling how much better he felt about rappelling; the line that he'd taken over the pool that had flummoxed most of us, leaving us with wet shoes, on the way down; and the sense that he was growing in his abilities within this environment. Jon didn't mince words; and he wore his emotions on his sleeve.

**Figure 22**

*Jon Buck: Medieval Canyon and Morning Glory Arch*



Rappel three in Tierdrop Canyon (see Figure 23) graced the screen during the interview as Jon four sentiments in less than one minute of interview time – teamwork, personal growth, spirituality, and family. He started by speaking of how the group worked so well as a team, “moving a lot smoother and [very] efficiently.” The entire team’s “knowledge,” he remarked, “was growing exponentially by the day!” He commented that he had personally grown, “very comfortable with what we were doing,” by this point in the trip. He mentioned again a connection with Mother Earth, wrought from being, “so close on the edge,” in the technical canyon environment. “It really allows you,” he continued, “to expand your mind, and kind of understand more of who you are, and who you want to be, and how you got to this point in life.” He closed by reflecting upon his family, whom he spoke of during the course and in the interview often and affectionately. As Jon slid over the intimidating edge at the top of this rappel, at the spot that he snapped the photo of a classmate taking the same leap that’s highlighted in Day 3 photo, “I remember looking back at it and thinking, like wow,” he said, “if my dad was here, my mom, and my sister, and they could see me doing this and how far I’ve come in my life and where I’m at now!” He finished with joy, “Definitely a pretty cool, pretty cool thing to be doing,” he finished. Jon Buck was so candid about his experience, thoughts, and connection to the desert landscape that I asked if he’d think more deeply about it.

**Figure 23**

*Jon Buck: Tierdrop Canyon*



Jon had made a comment when reminiscing Medieval Chamber day that it takes “a certain type of crazy” to enjoy doing these kinds of adventures. This is a concept that I’d been thinking about for decades. With well-thought facilitation, depending on the audience, could it be possible that the vast majority of people could positively benefit from a wilderness immersion? This stems from my early days of guiding and getting my feet wet with education in the outdoor setting. I developed a hunch that if well-facilitated, catered to the individual, every person could benefit from a wilderness immersion. I thought of my paraplegic seventy-year old aunt, who has no legs, and is bedbound for up to 24 hours a day, but on a good day, only 14 or so. My current standing on this was still out for intrapersonal debate; why? The answer to the question is clearly no, right? Facilitation. I can’t answer the question. I recalled a paradigm that I had thought of time and time again. Recall the question of who, and why, “would someone contemplating taking a course, of any kind?” I know people who would not consider a wilderness immersion; I thought of those to whom it would be a literal death sentence. That still doesn’t answer the question; potential benefit still exists. I thought of historical figures, the majority of whom loathed the thought of, and even, as we’ve investigated in this paper, differentiated it into its own concept. That still doesn’t answer the question; no facilitation. I thought of the victims of wilderness survival tales, of which I’ve read most of the major ones that contemporarily exist in print. That still doesn’t answer the question; no facilitation. I could go on with examples for days; but I hope that this punctuates the point of this nagging question. Jon had no trouble finding words, so I asked him.

After he made the comments in the prior paragraph when thinking about Tierdrop Canyon, I revisited and reminded Jon of the comment that he made about it taking “a certain type of crazy” to enjoy wilderness environments and the dangers commensurate with them. “Do you



think that it is possible,” I asked, “that [the environment of technical canyons] could be a reasonable place to put anyone in to develop those connections [akin to the ones that he made in the wilderness]? Jon answered the question for me. He said, “I think that it’s very individualized.” Something that I gleaned from his response that followed went deeper than the words themselves, however. An experience is, as Jon claimed, individualized. It is not unlike the intention that the individual arrives at the experience holding. That intention drives perception. I looked back at my question, and the words positively benefit stood out. Benefit belies the beholder, the perceiver. I dearly wished that I’d have asked every participant this question; but it was an impromptu query, and I had not. This had been one of the most looming questions of my career, however; and as a result of this work, I now feel that it is now resolved. Jon Buck’s final photo (see Figure 24) features the entire group that helped me through this learning process, and he himself had more to teach me before I tabled my investigation of his intentions.

He reminded me of a dill pickle that I’d brought out when there were only three other students and myself, basking in the shade, on the edge of a four-foot deep pool at the bottom of Pool Arch. We needed a snack, and I pulled out my dwindling supplies – we were halfway through our final day. I split the pickle into fourths and offered everyone a piece, Dane, Andrew, Jon Buck, and myself. It was a moment that Jon says he’ll never forget. He remembered eating what he called, “a bite of that pickle,” which it assuredly wasn’t much more than a bite after the rationing, and thinking, “oh my God, I would do anything for a whole size dill pickle right now...I love this!” I prompted him as to why that moment stood out. “It’s just kind of like remembering the little things,” he explained, continuing, “the situation you’re in...that allows for a whole broader spectrum of knowledge.” Again, Jon searched for deeper meaning, extrapolating from the taste of a pickle a “broader spectrum of knowledge.” It was hard not to marvel at his

optimistic and sweeping fervor. He explained how they had all learned so much; had overcome fears and challenges; had been in the adverse wilderness environment, and lighting off, as he put it, “off 100-foot rappels.” But then, he concluded, “you eat this one little tiny pickle, and you remember just a little taste of it and how good that was. That will be the highlight of your entire trip.” Jon Buck summed up his perception well.



**Figure 24**

*Jon Buck: Rock of Ages Canyon*



### **To Perceive, Pragmatically, as an Intention; and to Receive, Contentment**

Adriana's pictures and interview revealed her interest in contemplating the physics, math, or geology behind the structures within the pictures. She said that science is "usually" what she thinks about when she's "in areas like these." Reviewing Adriana's data for more hints of her intentionality of revealing the science behind her experience in the technical canyoneering course, I did come upon several instances of it, which I'll illuminate in this section; but through a more thorough investigation of her data, it came to me that there was much more to her experience than the intentionality of querying the science of the desert venue. It was difficult to place a finger on what exactly her main intention was – in some instances it was the science; and in others it was size and space and distance; it was color; it was physical materiality; she probed timeframes—past, present, and future; she questioned the names, the terminology, and the appellation of desert formations; the concept of gravity; and a myriad of other perceptions.

Interestingly, and scientifically, unlike most of the other participants in this study, Adriana did not intricately connect her overall personal comfort or well-being to the place. In fact, she was the only participant that explicitly pronounced that she does not coalesce nature with her spirituality. I asked her specifically if her photos brought her to think about her own spirituality or place in the world. "I haven't really linked a lot of my spirituality to nature," she responded. "The canyons and the rocks definitely put in perspective how small I am up against, like, the giant walls. And it also gives me a perspective on the abilities that I have to climb up or down these massive things," she continued. "Spirituality, [however], I don't really know". Adriana felt very comforted and even "at home" in her desert surroundings during the course, so much so, that she was able to put her most distracting emotions and feelings, ranging from thrill

to apprehension, to the side in order to fully focus on the venue, placing the highest value in inquisitive acuity about every piece of the landscape and the experience in which she was involved or came across. She brought to the course an intention of developing the most informed perception of every part of the venue that she encountered.

Prior to settling upon this notion of Adriana's intention, and due to its seminal placement in my first research question, I re-investigated the meaning of perceive. Cross-referencing four online dictionaries (Cambridge, Merriam-Webster, Oxford, and YourDictionary), I summarized the most common definitions of the word.

1. To grasp mentally; take note (of); observe.
2. To see, to be aware of, to understand.
3. To achieve understanding of; apprehend.
4. To become aware of (something) directly through any of the senses, especially sight or hearing.
5. To cause or allow the mind to become aware of (a stimulus).
6. To regard or consider; deem.
7. Perceive is defined as to see, hear or feel something or to have an understanding of something.

Of these definitions, Adriana's intentionality most closely matched "to achieve understanding of; apprehend," and "to regard or consider; deem." Reviewing her interview footage, I noticed a theme of how she interacted with the pictures that she'd submitted to me. Admitting that her phone/camera was nearly out of battery life throughout the course and that she'd only snapped a few pictures each day from which to choose the four that she submitted, she nevertheless regarded the photos judiciously as we flipped through them during the

interview. Her gaze had a prudent, calculating sentiment, as if she were contemplating deeply the innermost mysteries of each of the scenes.

Her own words sum up her engagement with those scenes while she was in the field. “For me,” she affirmed, “I’m just very level-headed, able to concentrate, relaxed, open in nature. It’s often even if it’s really stressful and crazy stuff is going on in my life. If I’m taking time to be outside, I’m often not bothered by those things. And I’m able to really focus on the tasks and stuff that’s at hand.” Adriana’s focus was paramount; it, alongside her development of personalized structure to the wilderness environment, engendered an emotion that necessitated clarification: contentment.

As she strove to place perception upon the desert environment, it brought Adriana the non-distracting feeling of “contentment.” One of the first questions posed to the participants as we rolled through the photos during their interviews was, “what emotions or feelings does this picture evoke?” Four times, Adriana replied “contentment.” Not being overly familiar with this word, I equated it with happiness; but when I mentioned ‘happy,’ or ‘happiness’ she would go back to specify contentment. I looked up the word and searched for concepts of contentment, and found that there are distinct differences between contentment and happiness. Most of the dictionaries that I accessed placed happy in the category of an excited, thrilled kind of energy, while contentment is more of a peaceful, gratified energy. One website that I accessed listed the attributes of contentment as “satisfaction; lack of envy; humility; discipline; and abhorrence of greed and corruption” (KofaStudy, 2022). These definitions put Adriana’s experience into better perspective. While other participants used the words ‘excited,’ ‘happy,’ ‘thrilled,’ and ‘stimulated,’ she felt more contentment. Some other phrases and words that she used to describe her experience that were outside of the usual range of feelings were “mesmerized,”

“fascinating,” “at ease,” and even, as mentioned above, “at home.” She stated that she felt “relaxed” during the course several times during her interview. Reflecting on the environment, she detailed the stillness and silence of the desert, relishing the peacefulness of it. “It definitely gave me [the opportunity] to focus on our surroundings,” she described, “and like, just being in the moment for the experience, you know, not being like distracted by other things that might be going on around us.” Adriana’s inquisitive perception fostered an unassuming and down to earth contentment, which in turn opened the space for more perception, which she took on from various perspectives within the desert venue.

Describing her perception of the experience while reviewing her Day 4 picture, Adriana detailed that how she perceived the environment depended on her position within in. “It’s all about the perspective of where you’re standing...” she stated. She described looking across the valley in the picture, comprehending that the most faraway cliffs were hundreds of feet in height, although one would never know that without the benefit of multiple perspectives from within the canyons – which, by Day 4 of the course, she’d had plenty. She continued on, “...which definitely changes the experience that you’re having in the wilderness as you go from looking at the top out, and then from the bottom back up, and all of that.” One can ascertain how Adriana’s perceptions morphed as her experience with multiple perspectives within the environment grew over the four days that she spent in the canyons.

Her Day 1 picture is from the middle of U-turn Canyon (see Figure 25). U-turn has two rappels at the top of the canyon. After dropping off of the top of one of the highest points in Arches National Park, the canyoneer enters into a fairly tight, shaded canyon. The class remained in that enclosed, dark, cool environment for the first couple hours of the route, given that, on our course, there were two rappels to set up and ten people to descend the rope at each drop. A short

stroll from the bottom of the second drop, however, the canyon opens up into a wide, arcing ledge that stretches around for several hundred yards. The first long distance views since leaving the top come into play. In Adriana's photo, the viewer can visualize a portion of this vast down-canyon view. This was Adriana's first time immersed in the environment of technical canyons; and, as with many in her situation, she was taken aback. "We were going through all of the first stuff," as she described the upper portion of U-Turn, continuing, "and then we dropped down into this, and I like, walked around the corner and saw it; and I had never seen the inside of the canyon like this. So, I was really stunned at...the coloring of the rocks, and [everything] was just super pretty!" Her astonished reaction to the canyon is a common one for first-timers; even having spent 25 years working within the canyons of the Colorado Plateau, if I haven't been immersed in the canyons recently, I still have similar reactions when re-introduced after a few months' time. I asked her if the picture made her think anything about her own knowledge or intellect. Revealing her scientific side for the first time, she responded somewhat guardedly.<sup>16</sup> "Um, well, like, whenever a lot of these photos and experiences in Moab a weird thing that I like to do whenever I'm in like interesting geological areas is to think about like what would have happened for it to erode that way. And like for the rock formations to be the way that they are," she indicated. I probed further on this line of thought. "Did you draw upon prior knowledge of geologic timeframes?" I asked, "Or were you just was it more imaginary; or was it a combination

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<sup>16</sup> I believe that she responded cautiously because she wasn't sure if I was seeking certain responses, thinking that hers might not be on target. I was not, of course seeking anything specific, and found her frank responses to be wonderful for assisting in answering the research questions.

of both?” She replied fairly slowly, “I would probably say it's more imaginary. I don't really have a strong geological background. I just kind of understand how different materials like wind and water can erode stuff.” Her tone became more confident as she continued on in an almost sing-song cadence, “So I always like to think like, oh! Was there a waterfall that was going right down where we're rappelling right now? If so, how long ago was it? Like, where did it go? Stuff like that.” Her animation was delighted as she recalled her experience in the canyon that day. It also demonstrated and reminded me that there's more to perspective than simply physical placement in a space; it has as much to do with one's background and experience within a space.

By the time she snapped her Day 2, Morning Glory Arch photo (see Figure 26), Adriana had double the experience in the canyon environment than she had when she took the previous picture. This is a picture of a massive chunk of Navajo Sandstone, a close-up of the top of Morning Glory Arch. Adriana marveled at the science laid out in full display in this natural phenomenon. She contemplated the weight and the structural integrity of the arch, marveling at how “how nature just figures out how to work out the mass distribution, to have the structures stay the way that they are. She did not mention astonishment or surprise the way that she had when considering her U-Turn Canyon picture, but rather settled into a version of perception that was more deeply embedded in the scientific wonder of the scene. Her primary emotion on this contemplation, she indicated, was contentment.



**Figure 25**

*Adriana: U-Turn Canyon*





**Figure 26**

*Adriana: Medieval Chamber and Morning Glory Arch*



Adriana's Day 3 picture (see Figure 27) was taken from the valley floor of canyon that we'd descended that day. The scene is of a sandy wash, typical of valley floors in the desert, revealing remnants of bygone flows from the monsoon summer rains. Pinion, juniper, rabbit brush, prickly pear, crypto – all of the usual floral suspects scatter the landscape around the wash. The left side rises gently into broken rockwork, revealing layers of sandstone, chunks of boulders, and smaller rocks scattered among the sand. To the right, colossal monoliths stack skyward, rising hundreds of feet. A distinct chimney of sandstone also juts into the wispy clouds. The chimney is shaded save for a shining prominence at its pinnacle. A deep blue sky stretches above the sandstone cathedrals and to the edge of photo. The scene is serene; and indeed, Adriana later remarked how oddly quiet it was in this place. I asked her what emotions or feelings did the picture evoke. She responded, "I'd probably say contentment again." I asked her why. "Well, I picked it because I remember when I took this photo, [Andrew], [Jon], and I had a very heated discussion," she began, continuing,

about what you call that rock sticking up – whether it was a chimney, or a chute, or a ladder. And I picked [the photo] because I bought that rock formation was really cool. And again, I was just mesmerized by how it would have formed, and what it will look like [into the future].

Adriana then described how "weirdly quiet" it was in this place, and how it allowed her the opportunity to "focus on our surroundings," to be "in the moment for the experience," and "not being...distracted" by outside sounds. Several prominent formations penetrate the picture in addition to the chimney in the background of which she spoke. Having been in these places, sitting, standing, or sleeping, at dawn, day, twilight, and nighttime, I understand her fascination with the stillness of the environment. A mysterious permeates the atmosphere there.



**Figure 27**

*Adriana: Tierdrop Canyon Photo*



The mysteriousness of the desert environment effected a sense of comfort and content in Adriana unlike any of the other participants. Her final picture (see Figure 28) conjured in her a sense of “awe” when we viewed it together during the interview. The scene reminded her of feeling a comforting warmth, producing senses of “relaxed and at ease,” she disclosed, continuing, “I’d even say like, at home; I felt very comfortable,” she finished, placing emphasis on the last word. I asked her if the experience led her more devoted to anything. “Yes,” she replied, “I’m more...emotionally and intellectually devoted more to nature.”. One of her closing thoughts connected the science, the contentment, and the appreciation and devotion that her

experience in the desert fostered. As we discussed the possibility that places like the desert scenes in her four photos are not guaranteed to exist into eternity, she paused. I know, she began, “that it's inevitable; and I understand probably too much of the science from my own comfort level behind it. Um, but, yeah...it's difficult to think about because it makes me sad.” Adriana finished our interview by contemplating her future from that perspective. At the time, she was studying to be a teacher, torn between her love of science and the thought of educating. “I feel like if I pursue my higher education to the extent that I want to, I'm going to be in a position where I can enact change on a level larger than myself. And I feel like when that time comes, I probably will take on that responsibility and work [to make a positive change on this front],” she envisaged. At 19 years old when this data was collected, her perspective and ambition may provide devotees of the desert of all ages with a bit of contentment in its own right.

**Figure 28**

*Adriana: Rock of Ages Canyon*



## Authenticity

All that you touch

You Change.

All that you Change

Changes you.

The only lasting truth

Is Change.

God Is Change.

Octavia E. Butler,

*Parable of the Sower* (Butler, 1993, p. 1).<sup>17</sup>

Stormy Weathers shared this quote from Octavia E. Butler’s 1933 *Parable of the Sower* with me (without the last line) during his interview. He had alluded to the concept of wilderness being invented, and I asked him to expound upon his understanding of the concept. Stormy exhibited a well-versed understanding of the history of the invented delineation of wilderness and non-wilderness spaces going back centuries. As time drew into the 19<sup>th</sup> century, he noted that demarcation between “natural” and “non-natural” was fashioned by humans, “creating realities and social structures to reinforce,” the division. “Getting to a pure natural experience is impossible,” he punctuated, adding pointedly, “From the get go.” Calling the concept of experiencing nature devoid of humanity, as a human, “an aesthetic ideal, or...an experiential ideal,” he detailed even simply the clothing that we wear into the backcountry has been changed

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<sup>17</sup> The format that I’ve provided here is exactly the way, with formatting, grammar, and capitalizations included, the way that it is written in Butler’s novel.



from some natural state to a humanized condition, and then leeches or sheds into the environment, hence changing in some microscopic way the condition of the wilderness itself. It is a constant, timeless, never-ending cycle; and then he nearly perfectly recited the quote, (leaving out the last line). “Octavia Butler,” he credited, continuing, “Everything you touch, you change; Everything you change, changes you; The only lasting truth is change.” Looking at the picture that brought Stormy to these associations, it is evident that his speculation, alongside Butler’s, are based in foundation. He concluded this thought process with a final statement, “So there's no like pure, separate environment. There's only our bodies and these other bodies interacting.” Stormy had come to the technical canyoneering course having spent more than a fragment of time thinking and learning about these concepts; and this is just one example of many where he impressed me—as a connoisseur of these types—of thought processes in relation to “wilderness” based ventures.

The recital of Octavia Butler’s quote hints at the authenticity that Stormy brought to the course with him. The quote comes from a series of sci-fi novels that Butler authored in the 1990s that are to this day hailed as some of the progenitors of foretelling climate change in action. Butler herself was a loner, extremely introverted, and, self-admittedly before she passed away in 2006, oftentimes brooding and fending off depression. Nevertheless, her dystopian novels are acclaimed as seminal in their exploration of “themes of Black injustice, global warming, women’s rights, and political disparity” (<https://www.octaviabutler.com/theauthor>). Butler received nine awards for her works prior to her passing; and three have been awarded posthumously. Stormy discernably respected Butler’s work, and like her, echoed a conspicuous intelligence; but unlike her, during the course and throughout his interview, was sociable, outgoing, cheery, and fun. He brought to the course with him a large smile, and a bearing of,

“This is who I am.” He was not arrogant; nor was he timid. He concentrated and he laughed as he underwent the learning curve of the technical systems in the course, of which he had limited familiarity with prior to our excursion. Then on Day 4, he sang a ballad at the top of his lungs that was so incredibly bold and stunning and polished that it sent shivers down the spines of the other participants, including myself – it was especially enthralling because prior to that moment he’d never once mentioned his perceptibly coached and accomplished musical facility.<sup>18</sup> As I reflected upon the data that I had from Stormy—the pictures, the interview, and my recollections from the course—it came to me that he offered what many of us who participate in wilderness ventures strive to offer throughout our careers. He unabashedly approached the endeavor, the course, and its commensurate venue, with an intention to exist within it as he does within the rest of his world, with seemingly unencumbered authenticity.

Recall from Revelations that Stormy revealed one of his intentions was to enter a level playing field in a discipline of outdoor adventure with his partner, with whom he partook the technical canyoneering course. This shone through forthrightly throughout his interview; but as I scoured and reviewed the data, I came to know that this was not his sole intention, nor his main one in terms of building a perception of the wilderness venue. His intention to enter the venue with his truly authentic self was simply enhanced by Steve being there with him. His Day 1 picture (see Figure 29) is, in his own words, of “two students wearing seemingly identical Patagonia puffer jackets,” the two students being Stormy and Steve. He continued, “overlooking

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<sup>18</sup> At a later date, during his interview, I asked Stormy, as I did all participants, if they would explain their educational backgrounds. Stormy revealed that one of his two bachelor’s degrees is in music.



Three Kings Monument at the bottom of the third rappel.” The backdrop of the photo is the striking down-canyon view from the third tier of U-Turn Canyon with the monument in the center of the scene. As this picture hung on the screens in front of us, I asked Stormy about the transferability of knowledge gleaned from experience in this place to his “everyday life.” He responded with a lengthy response that, like the reply to the question that we explored above that included the Butler quote, was deep and philosophical beyond my expectations. “I guess there's a lot of everyday existence that indicates that you don't belong; or that you don't have control of your life; or that you're missing something,” he speculated, “And so, like, the elemental experience of being in the canyon really helps you understand, like, key elements of just [being] human.” He then mentioned some of the “elemental” aspects of the canyon –plants, landscapes – and then continued,

And so, it's not the same kind of, I don't know, intricate class order, or intricate, like, you know, hierarchy, that you have to scale in order to have your voice matter, to have something, you know? There's like a lot of simplicity in [the canyon environment]. And so, I guess the applicability is to...kind of see myself more as this like, resident of the planet...on Earth, right? Yeah, like, I belong on this planet. I live on this planet. And I call it my home and it's...a place I can navigate. So, [the canyon experience brings] this sense of belonging on this planet, rather than the feeling that's kind of lurking underneath a lot of our existence. Which is like, anxiety for not being enough, or anxiety for not like meeting certain societal standards, or societal expectations, right? So, there is an acceptance, it's in [the canyon environment] that is simpler, I guess, of just like being out there and not having to justify yourself, just having to live.

Stormy repeated this very sentiment several times during his interview—the concept of simply being in the place and appreciating the straightforwardness of the experience.

**Figure 29**

*Stormy Weathers: U-Turn Canyon*



His ability to appreciate the opportunity to be there with his partner, but to move beyond it to have a deeply meaningful personal experience resonates throughout his data. His second picture (see Figure 30) is an encompassing view of Morning Glory Arch. In this place he described many emotions and connections to his experience, his perception, in that place. He reflected on the place, first describing the scene—the angle of perspective; the colors with a “splash of fall;” the scale of the people compared to the sandstone landscape; the lack of poison

ivy; and so on. He then compared the scene to finding a long-forgotten, or hidden, “box of chocolates” that one may inadvertently come upon. He used the metaphor to depict how special the experience of being in that place was, evoking a feeling of “wonder,” of “joy and excitement,” and the privileged over-indulgence of such a “wonderous perspective” in a place that he compared to “The Land Before Time.”<sup>19</sup> Stormy went on to meticulously detail the sounds and the odors of Morning Glory, and the emotions that the entire amalgamation of physical prompts conjured. He spoke glowingly of a raven and her caw; of a little boy in another group wearing a rainbow t-shirt; of a babbling brook; cottonwoods tinting with gold; of the incredible new possibility of access to places like this, and the potential to bring and to share with “nieces and nephews, brother and sister.” His reflections echoed the yarning of a magical tale in which he was placed as an unwitting and lucky character within.

Stormy’s self-awareness and ingenuity imparted an unassuming self-confidence and openness that fostered community in the course. Several of the other students were contentedly surprised at how well everyone in the course so quickly bonded. Stormy, however, scarcely mentioned the bond – he conveyed an air that humans simply should feel connectedness and mutual attention and care for one another – and not in just this type of situation, but in all aspects of life. There is a commonality in groups, he explained, whereby one must sometimes “submit to some things that are not always what you want; or what you would do; and so that dynamic team

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<sup>19</sup> I failed to clarify during the interview whether Stormy was referring specifically to the animated film series and media enterprise, or just to a general sentiment of a bygone prehistoric landscape. I failed in this regard because I was only vaguely aware of the series and media enterprise prior to reviewing the data post-interview and so it did not occur to me to inquire.

is important. It keeps you humble. It keeps you connected.” He demonstrated this understanding of group dynamics, and being self-aware, and of exuding humility within a community, continuing. His third picture (see Figure 31) is of everyone on the course, instructors and participants alike, except for Stormy, who was presumably snapping the photo at that moment. He described how, by this time in the course, everyone had learned a lot and all were eager to get involved in setting up the anchors. “There were a lot of cooks in the kitchen,” he metaphorically stated. He continued on from his earlier remarks about retaining self-awareness and humility as a member of a group, “but it can also be like, the lowest common denominator – like, you may be limited sometimes by someone else’s perception, or someone else’s interpretation of the facts.” This stood out to me as being similar to an article that I’d read about Octavia Butler while reviewing Stormy’s data. *Locus: The Magazine of the Science Fiction & Fantasy Field* regarded her as “one of those authors who pay serious attention to the way human beings actually work together and against each other, and she does so with extraordinary plausibility” (Powell’s City of Books, 2022). Stormy demonstrated a likewise extraordinary perceptivity of group dynamics at play as he took this picture. The group, he recounted, including himself in beginning, “we,” and continuing, by this point in the adventure, “had more knowledge about topography, and...interpreting the [route] descriptions, and navigating.” As seven other students and two overseeing instructors crowded around one anchor system as is demonstrated in this picture, he modestly removed himself and took personal time to reflect. “This was one moment where I remember like stepping back and letting others do the anchor,” he said, continuing, contemplatively, “You know, you can’t have everyone solving the same problem [anywhere].” He recounted that since there were many hands involved in every singular anchor system, he’d

asked the instructors if the next day they could schedule some time for individuals to build their own anchors, and that his request was indeed accommodated.

**Figure 30**

*Stormy Weathers: Medieval Chamber and Morning Glory Arch*





**Figure 31***Stormy Weathers: Tierdrop Canyon*

Stormy’s educational background and life experiences that he revealed explicate some of the tendencies of authenticity that he brought to the course with him. At the time of the course, he was 36 years old; and he had utilized his years to develop a maturity that was perceptible. He held a bachelor’s degree in English and one in Music. He also had a master’s degree in “Literature and Environment.” He’d worked in the national parks during summers through a position with the Student Conservation Corps (SCA). After graduate school he joined the Grand Canyon Trust as an AmeriCorps volunteer, engaging in trainings for groups that he described as “non-profit citizen science.” A document published by the Utah State University Women &

Leadership Project makes the argument that, “A college education leads to greater independence and feelings of control; College graduates demonstrate a greater ability to make reasoned, reflective, and unbiased judgments; Educated individuals develop higher ethical and moral standards; and that College graduates have increased levels of academic and social self-concept and self-esteem” (Utah State University, n.d.). I would second those ideas, but having earned an advanced degree myself, and being that any academic publication on the matter could be considered self-serving and thereby biased, I will leave the matter of the emotional intelligence benefits of advanced education to speculation.

Stormy’s service with the SCA and AmeriCorps (n.d.) may have influenced his character. Having been in the outdoor industry for so long, I’ve worked alongside many people who’d been involved with the SCA as well as AmeriCorps, and have come to know that individuals who work for those programs tend to develop a maturity and a communal sense of leadership; but for this manuscript I cross-referenced the SCA and AmeriCorps websites. Their Mission Statement reads, “SCA’s mission is to build the next generation of conservation leaders and inspire lifelong stewardship of the environment and communities by engaging young people in hands-on service to the land” (SCA, 2022). This unerringly resonated of Stormy’s character. The 2022-2026 Strategic Plan of AmeriCorps states their mission as, “To improve lives, strengthen communities, and foster civic engagement through service and volunteering;” and their purpose as “To bring out the best of America” (AmeriCorps, n.d.). They publicize a commitment to diversity, which I found to likewise echo the air of Stormy’s authentic character:

Our Commitment to Diversity: AmeriCorps has a decades-long commitment to advance racial and economic equity through national service and volunteerism. These efforts are designed to expand pathways to opportunity for all Americans. Racial and economic

equity will be central to our planning and implementation of all priorities, including that we ensure AmeriCorps members and volunteers reflect the diversity of the American people and the communities in which they serve. (AmeriCorps, n.d.)

They also list and explain five goals in the strategic plan that expound upon the sentiments detailed above. The sentiments that the SCA and AmeriCorps highlight in their mission statements shone through in the data that I collected from Stormy; and I thought again to his reference to Octavia E. Butler's *Parable of the Sower*. "Embrace diversity Unite," she wrote in a later chapter, "or be divided, robbed, ruled, killed By those who see you as prey. Embrace diversity Or be destroyed" (Butler, 1993, p. 58).

Stormy's reflective nature shone through as he reflected on the final day of the course. His picture (see Figure 32) is a panoramic, stretching from a narrow part of the canyon we'd just emerged from on the right, to the backside of another student on the left, prepping her system for the second to last rappel of the trip in Rock of Ages Canyon. Featured in the photo is Stormy's partner, relaxing on a rock, dried off and warming himself from the chest-deep pools of water that we'd all just navigated through. He said that he chose the picture because it was a scene of relaxation and that it brought him to reflect upon the course in its entirety. On the first day, he confided that he'd been frustrated at the speed at which the group worked through rappels. Ten people utilizing one set of ropes indeed takes a fair amount of time. In all, we'd completed 40 rappels as a group on that first day. But he realized through the days that this was the process of technical canyoneering, and that the environment around him was to be savored as he waited his turn in between the jumps. He grew appreciative of the ebb and flow between action and relaxation; and Steve's peaceful posture reminded him of these lessons. I asked him what the picture makes him think about in regards to what is important in life. He again brought up how



he relished the relative simplicity of the experience. “It was refreshing,” he started, “to approach the day and [just] do the thing before us. There wasn't anything else that was lurking or that I would remember to do.” He continued, “You know, you either like, got through the canyon, or you didn't!” We both laughed at this point in his interview. “I think the elegance of canyoneering is like, that. It's like, a holistic path, and a really defined path; and most of our days are like, having to choose and prioritize, delegate.” I finished by asking him what value the course had in terms of his life or for his growth as a human being. “More internal confidence in navigating the planet,” he articulated, “The earth and the planet.” He'd mentioned before his excitement for bringing other into the canyon environment; and that was how he finished. “I guess I felt more competent, and excited to do this again, and excited to share part of the world that I had already valued and have wanted to share with others even more.” All that you touch, you change. All that you change, changes you. The only lasting truth, is change. It feels as if Stormy's, and all of the participants' openness to share themselves on course touched every other individual participant on the course; and indeed, we're all changed from the experience.

**Figure 32**

*Stormy Weathers: Rock of Ages Canyon*



## Leaving the Canyons

Leaving the canyons is sometimes simple. Sometimes, these things happen: the group dynamic are off; or, the temperatures are freezing and the wind blows hard for five straight days; or, we have a behavioral issue in the group; or, we have a near miss with a flash flood and everyone is on edge; or...the list goes on. While working in the canyons, I have witnessed many frightening incidents, including one which concluded with the very saddest imaginable outcome. I have been involved in several behavioral evacuations from the canyons, both at Colorado Outward Bound School and with the college that I now work for. The environment of the canyons adds spheres to its setting as an educational venue that goes beyond the norm of what many may envision as a classroom; and when the environment rears the fiercer side of its range of elements, the situation can become challenging, alarming, frightening, and even deadly. None of the things that I listed in the commencement of this paragraph happened on this course. Our weather was spectacular. The group dynamic was phenomenal, with everyone offering salient contributions to the success of the course. We only had one slight near miss; and we learned from it rather than suffered from it. I write this because I am thankful to the canyons of the Colorado Plateau in allowing the students and instructors in the course studied for this project to pass through their imposing yet resplendent corridors not only unharmed, but enlightened. Leaving the canyons is sometimes simple, but sometimes, as in this course, we're not quite ready to go.

I encountered a curious "sentence example" on the yourdictionary.com site, under the word "perceive." "Sometimes, we perceive things as what we want them to be instead of what they actually are" (Yourdictionary.com). I contemplated, and eventually questioned, this statement for quite some time. Thinking of the participants in this study, I pondered their

perceptions. It is evident that each of them perceived “things” – i.e., the desert environment and the technical canyoneering course – uniquely in their own ways. They brought intentionality to the venue with them, which in turn, led them to ‘perceive things as what [they] want them to be;’ but it ends there. There is no ‘instead of what they actually are.’ “After all,” asked Zink (2005), “what can be truer than an individual’s experience of something?” (p. 16).

I laid the participants’ photographs out in front of me one more time, all 32 of them, in apprehension of moving on. What had I overlooked, I asked myself? There was Dane’s Medieval Chamber, with the mysterious and telling dangling rope. Jon Buck’s first moments as a technical canyoneer. Jay’s shadow in the desert sand. June’s contrails. Adriana’s portrait of a mass of sandstone on the Morning Glory Arch. Stormy’s two students in matching puffer jackets. Rane’s close call. Steve’s Land Before Time. 24 more. I felt that the passion, and the value, behind these submissions to this project cannot be fully illuminated by me. It was time to move on.

In the final chapter, I will conclude this study through an exploration of three denominators. First, I will introduce and explicate common themes that surfaced as I sifted the data and developed Chapter IV. Secondly, I will revisit the research questions, exploring the significance of this study to the dimension of educational practice through the lens of educational criticism and connoisseurship. Third, I will investigate the implications of this project in light of several considerations, including the venue, the structure of this type of course, and in reflection of future exploratory work in this field. My goal is that the final chapter magnifies the significance of the participants’ voices within this study.

CHAPTER V  
THEMATICS, EVALUATIONS, AND IMPLICATIONS

**Overview**

The purpose of this dissertation was to study college students' perceptions of the desert canyons of the Colorado Plateau. The methodology of educational criticism guided this project by organizing the educational evaluative process through four dimensions, description, interpretation, evaluation, and thematics (Eisner, 2017). In Chapter IV, I provided descriptions of the participants experiences in the desert canyons, and within those descriptions unfolded initial interpretations of their perceptions. The narratives in Chapter IV themselves largely address the descriptive and at least initial interpretive goals of educational criticism. I will offer some additional findings on those dimensions in relation to the research questions in the next sections of this chapter. The evaluative and thematic dimensions have also been alluded to in Chapter IV, but here I will contextualize those aspects of this educational criticism by responding to the research questions through the lens of the methodology.

Eisner (2002b) posed the questions, "What are the larger lessons offered here? What does it all add up to?" (p. 229). This chapter is divided into three sections. The first section is an account of how the primary finding of this project came to my attention. It begins with a description of how a finding came to my attention, and it responds to the first research question, "How do college students perceive their wilderness immersion experiences?" The second section- beliefs, values, and commitments- responds to the second research question, "What beliefs, values, and commitments do students foster in response to their perceptions of

wilderness immersion?” This section is broken down into two smaller headings in response to the findings, “A Range of Complexity in Beliefs, Values, and Commitments,” and “Great Appreciation.” The third section responds to the implications of this study by focusing on the third research question, “What do these students' experiences inform us about wilderness immersion as a component of educational programming?” The next section illuminates the findings in response to research question one.

### **Response to Research Question 1**

Q1 How do college students perceive their wilderness immersion experiences?

The data in this study demonstrated that the participants' authentic and true selves indelibly crafted each of their individual perceptions of the desert landscape. Their perceptions were all incredibly unique and were described in Chapter IV. In this section, I illuminate just a few of the many examples that led to this finding.

On Day 2, the participants navigated a route known as Medieval Chamber and Morning Glory Arch. That day, the students traversed across 3.68 nautical miles of desert terrain, and dropped down the canyon about 810 feet in elevation. There was 185 feet of vertical gain over the course of the day, as well. They encountered a variety of desert micro-environments, including open mesa; side canyons with standing water in slickrock pools; a riparian desert jungle, replete with lush greenery and towering cottonwood trees; dry, sandy washes; and an encounter with jacked-up ATV's as they crossed the infamous Fins and Things jeep trail. There were alcoves of what Andrew described as “small village looking plots” of “six to eight-inch high” cryptobiotic soil. Lessons and learnings were scattered throughout the day. In the end, however, every one of them chose to submit a photo from within a couple-hundred-yard section of the entire day's journey.

The photos they chose were all from a relatively small sliver of the canyon that day but their individuality shone through in both the pictures and in the participants' perceptions of the environment. Four of the pictures—Jay's Figure 6, Andrew's Figure 14, Dane's Figure 18., and Jon Buck's Figure 22—were taken within or just outside of Medieval Chamber, a mere 90-foot stretch of wilderness desert landscape. The other four pictures—the Morning Glory Arch images from Stormy's Figure 30, Steve's Figure 10, Adriana's Figure 26, and June's Figure 2—also highlight a small physical area of space. Medieval Chamber and the top of Morning Glory Arch are very proximate to one another. So, of eight students' experience here, eight students' perceptions of their wilderness immersion on this day were all highlighted in an extremely small space relative to the space across which the entire day's experience occurred. Figure 33 shows the entire route (the red line) that the participants navigated that day—see that the Medieval Chamber and the Morning Glory Arch are right next to one another. The participants all chose essentially the same area from which to highlight the journey that day, but the interviews revealed that their perceptions of that place were very individualized.

**Figure 33**

*The Medieval Chamber/Morning Glory Arch Technical Canyoneering Route*



The portions of the interviews dedicated to the Medieval Chamber/Morning Glory Arch photographs revealed the participants all perceived the canyon distinctively. Each of the participants described unique experiences. While reviewing his Day 2 photograph, for example, Steve revealed, “I think that in all of my four pictures that I gave to you, I wanted to give you pictures that had people in them.” With that statement, Steve showed that he had purposeful intention in the photos that he submitted. The import of this is that he had a reason for doing so. He followed that statement with the following:

a lot of times like you see this wonderful nature photography, without anybody in it, and it's like, we're all using these lands together. So, I like to think about that, because I do a lot of times when I am outdoors recreating, yield that wish or desire that I would be, like, the only person there – that kind of selfishness I think we can feel when we're in the outdoors (see Figure 11).

With this statement, Steve described a part of himself. He demonstrated that he can't hide from who he is when he goes into the wilderness, while also revealing that the wilderness fosters a drive within himself to work on bettering himself in a way that he sees fit. Steve was very experienced in the wilderness setting, and in many instances revealed how he utilizes wilderness spaces to work on himself. He perceived the place, therefore, in a way that matched a parameter that was demonstrated in every participants' data, that being that people are very authentic in the wilderness setting. The reality of the environment compels people to be themselves. Being themselves in a way that they might not be able to as freely achieve in the world at large offers them the opportunity to authentically work through matters within their own being that might otherwise be suppressed. Their perceptions of the place, therefore are revealed as very individualized disclosures about themselves less than they are about the landscape or the environment. The following is another example of how Adriana also verified this finding.

When Adriana was asked about what feelings she had as she reviewed her first picture, she disclosed what she called, "a weird thing that I like to do" in outdoor settings is to think about the science behind the nature. This highlighted two findings. First, she cannot hide herself when immersed within the setting. While many may not consider it a "weird thing" to engage with nature in the way that she revealed, she found it individualistic enough to term it in that way. Secondly, she formed a perception of the place by contemplating the science behind it. Adriana's Day 2 photo displays the mass of Morning Glory Arch (see Figure 26). It is from the top, up close, not taken from the loftier perspective of the other pictures of the arch that were submitted. There are also no people. The flora, sunlight, and other surroundings are not highlighted. It is a photograph of a massive chunk of Navajo Sandstone, a close-up of the top of the arch. When Adriana was asked about what the picture made her feel, she recalled thinking



about the structural integrity and the weight of the rock. She continued on for a couple of minutes, speaking of numerical sequences and the ways that nature mirrors mathematics. She revealing her perception of the place straightforwardly, she finished with, “I don't know if that's what you're looking for,” again, highlighting, consciously or not, the authenticity that she'd just laid out in forthright language.

Adriana's perceptions of the setting include a scientific outlook. She mentioned science again during her interview when looking at her pictures from all of the other days of the course, as well. When reviewing her Day 3 photo (see Figure 27), she again mentioned thinking about the structure of the rock formations; and reflecting on her U-Turn Canyon (see Figure 25), she brought up her curiosity about the geology that's integral to her comprehension of the canyon view. Reviewing that photo, she spoke pensively about the scientific qualities of the landscape, this time in geological timeframes and hydrologic erosional patterns. Adriana revealed straightforwardly that scientific principles are a great part of her perception of the wilderness. She repeated with all of the pictures that looking at them later made her feel “contentment” or “happiness,” but when pressed further to expand upon that, she revealed her interest in contemplating the physics, math, or geology behind the structures within the pictures. She said that science is “usually” what she thinks about when she's “in areas like these.” The area of which she was immersed in during her course was, of course, wilderness desert canyon. So, there exists a theme in Adriana's perception of the wilderness of a latent intention to seek out the science behind the setting. This, in turn crafted her perceptions of the canyons.

The participants revealed their truest selves as an effect of being in the setting of the desert canyons. The adage, “you can't hide from your true self” came to light, and to that, we may add, “in the wilderness setting. The process of making the finding that I describe here is the

focus of the narratives of the participants' perceptions in Chapter IV. I posit that those descriptions respond to the first research question, "How do college students perceive their wilderness immersion experiences?" To contextualize this structurally and substantially through the methodology, I now apply Eisner's (2002b) questions, "What are the larger lessons offered here? What does it all add up to?" and the response that I've come up with is that students reveal their truest selves through during immersive experiences in the wilderness. Their authentic selves shape their perceptions of the setting.

Educational studies on students' revealing their true selves as a result of an immersive experience, as contextualized as a concept in this study, are few and far between. There are a few examples, however. In a study of middle school mathematics, Imm et al. (2008) asserted that "we ought to consider everything that students bring to the classroom" (p. 458). Oleson (2020) dedicated Chapter 2 of her book to college and university students' individualism. In the introduction to the chapter, she stressed that it is important for faculty "to know what [students] bring to the classroom, including their psychological needs, their expectations, their personal and social identities, and their worries and concerns" (p. 27). The book focuses on strategies that may assist faculty members in enhancing their awareness of their students' backgrounds and intents. There is a field that traverses many disciplines, from gender identity to medicine to business that is dedicated to student intentionality, aptly termed "entrepreneurial intention" (see Brown & Knobloch, 2022; Justus, 2021; Karyaningsih et al., 2020; Moraes et al., 2021; Muffatto et al., 2021; Sherkat & Chenari, 2022). The studies look into students in various disciplines intention to utilize their education in pursuit of entrepreneurship following their educational experiences. While this category of intention does not exactly align with my use of the term in this study, I believe that it is worth mentioning as the field is fairly prolific; perhaps this will generate future

interest in tangential research. Other than the existence of an archive of entrepreneurial intention research, I could find no other studies that discuss students' revelation of their truest selves in the manner that I have framed it in this study.

The participants in this study brought extremely complex and nuanced personalities to the wilderness environment. Educators might seek out students' intentionality as a paradigm for providing deeper, more enriching, and more individually significant opportunities in the structure of the "classroom ecology" (Eisner, 1988). Eisner (1988) framed the classroom ecology as the interacting and interdependent aspects of the curriculum, the pedagogy, the school structure, the evaluative processes, and the intentions of the educational setting. Uhrmacher et al. (2017) defined the intentions as the "aims and goals...what is supposed to happen in the classroom" (p. 23). This study demonstrates that the students arrive at their educational settings with their own unique aims and goals, with their own visions of what is supposed to happen in the classroom.

This finding may lead educators to reconsider the experiences that they facilitate for students, in wilderness settings or more traditional classroom settings notwithstanding. The extraordinarily distinctive perspectives that the eight students in this study had, in the likewise extraordinarily sensory-laden environments in which they traversed, leads me to wonder if there might be even more individually-driven intention in a less stimulating, safer environment, like a more traditional classroom. There were times during the data analysis and the composition of this manuscript when I wondered that if there was anything that Hannah and I did, as instructors of this course, that had any effect on the students' perspectives. It seemed at least partially true that their intentionality drove nearly every part of their experience. We did, of course provide curriculum, i.e. the content of all aspects of technical canyoneering; the pedagogy, i.e., we mediated the content experientially, in small groups; a fair evaluative process; a school structure,

i.e. an emotionally and physically safe environment, given that it was within desert canyons; and we did achieve our intentions, i.e., our aims and goals for the students. The participants' aims and goals predominated the instructors' prescribed "school ecology," however. I propose that the truer to themselves that students feel and bring to the surface of their educational experiences may be the prevailing factor in what they perceive, and therefore gain from that experience. In the next section, I move from the basics of the participants' perceptions, and provide an overview of the findings of what beliefs, values, and commitments were fostered as a result of their perceptions.

### **Response to Research Question 2**

Q2 What beliefs, values, and commitments do students foster in response to their perceptions of wilderness immersion?

The second research question yielded explication on the participants' beliefs, values, and implicit commitments. The beliefs fostered as a result of their time in the canyons were that (a) wilderness places need to be protected, and accessible; and that (b) people are very small comparatively to wilderness landscapes/earth. The values fostered as a result of their experiences were (a) wonder that cultivates mindfulness and (b) and group bonding. I could not pinpoint any definitive commitments that were fostered through the participants' experiences in the desert canyons, although the participants implied that the experience caused them to ruminate on both prior-held and new pledges of various sorts. The participants in this study revealed a wide range of beliefs, values, and commitments that were fostered as a result of their immersion in the desert canyons. The question seeks to gain understanding of the greater value of an experience like this course was to their lives beyond the immediate sensory takeaways and feelings from the experience itself, i.e. the "perceptions." In this section, I will elucidate how the participants beliefs, values, and commitments were revealed in a pattern that had to do with their life

experience as well as their experience with wilderness, physically and educationally. The range of beliefs, values, and commitments was wide, but all that the participants revealed was offered in the context of appreciation of the place that was profound. Therefore, I first offer contextualization of the findings, and then amalgamate them into likenesses under the heading of great appreciation.

Prior to conducting this study, I expected to find that by exploring students' perceptions of their immersions in the desert canyons would demonstrate how profoundly the experience fostered certain, concrete beliefs, values, and commitments among most of the students. Prior studies have demonstrated that wilderness ventures indeed elicit feelings, thoughts, and viewpoints in the participants. Themes emerge from various types of studies. Loeffler (2004) conducted a study of outdoor education students' experiences that likewise utilized photo-elicitation as a data collection tool. Her data revealed three themes: "spiritual connection with the outdoors, connections with others through outdoor experience, and self-discovery and gaining perspectives through outdoor experience" (p. 1). Patterson et al. (1998) used a hermeneutic approach to study the nature of outdoor education students' wilderness experiences, and also found that themes that emerged through the participants' experiences: "challenge, closeness to nature, decisions not faced in everyday environments, and stories of nature" (p. 431). Arnould and Price (1993) revealed the themes of self-renewal, "communitas," and harmony with the natural environment (pp. 37-41). Ramírez and Allison (2022) found that "interviewed participants perceived seven long-lasting influences of expeditions" that they attributed to helping them throughout their lives (p. 1).

Other studies in the field have made similar inquiries. In a article published in the *Journal of Environmental Education*, Cachelin et al. (2009) analyzed 99 fourth-grade students' responses

to prompts about a wetland in order to gauge their affinity for the environment. They studied both students who had visited and studied within the natural environment. Strikingly, all of the students who visited the wetlands expressed that they wanted to go back, and that they were largely motivated to learn there. The only students who responded that they did not want to go to the wetlands were ones who were in the test groups that had never been there (p. 6). This seems relevant to this study, as the data demonstrated that the participants who'd spent the most time in backcountry settings were also the ones who had put the most time into contemplating and learning about the concept of wilderness. Everyone in the study wanted to learn more; and the more they knew, the more they wanted to continue to learn.

Significant life experiences (SLE) research is a field that began with the work of R. Thomas Tanner, an Environmental Studies Professor, in 1980. Tanner, described by D'Amore and Chawla (2020), "was motivated to initiate the study of SLEs after reading biographies and autobiographies of prominent conservationists" (p. 804). Significant life experiences research is "the study of experiences that promote the development of values and behaviors consistent with awareness of and appreciation for nature" (D'Amore & Chawla, 2020, p. 800). While much of the research has focused on how SLE as a child affects the adult's life choices in regards to affinity toward the natural environment, Chawla (1998, 1999) found that people also asserted that all time spent outdoors, at all life stages, lead them to feel attracted to engaging with, and working on behalf of nature and environmental causes. D'Amore and Chawla also cited seven qualitative studies published by Chawla that found that "witnessing habitat destruction, teachers or education, youth groups, and books" were additional events and educational opportunities that lead people to feel likewise attracted towards nature (p. 802). I cite the Cachelin et al. article and example as a starting point for this section, but since it studied children, I also wanted to point

out that SLE research has demonstrated that it is not always childhood experiences that constitute the sole influential factors to a person's views on nature. My data did not reveal with full clarity the levels of exposure to natural experiences that the participants in this study had in their backgrounds, so here I want to highlight that the literature shows that the experiences that lead to positive feelings about nature may come from a wide variety of exposures and sources throughout life.

I also could not ascertain with a great level of confidence how much the singular desert canyon experience that the participants in this project studied within fostered their beliefs, values, and commitments; but the data demonstrated that the more significant life experience that a participant had adventuring, pursuing education, and working within backcountry environments, the more articulate they were in expressing their beliefs, values, and commitments in relation to wilderness-based causes. This is not an attempt to place more or less value on any participants' beliefs, values, and commitments in reality; it is only to demonstrate that the greater the experience level the participant had spent within the backcountry environment, the more time, correspondingly, that they'd put into putting words to their beliefs, values, and commitments regarding the matter. The following sections interweave scholarship that highlights fields of study regarding experience with the participants' expressed beliefs, values, and commitments- again, not necessarily fostered entirely from their experience in this course, but rather as revealed as pre-existing feelings and surfaced as a result of having participated in their course and this study.

The participants showing their authentic selves shaped their perceptions of the environment in which they were immersed, and it likewise shaped the beliefs, values, and commitments that they gravitated towards. of what they wish to take away from an experience.

Their intentions may be conscious and forthright. Stormy may be placed in this category. At 36 years old, he had attained a fair amount of physical experience in backcountry places and pronounced educational experiences relating to the wilderness concept. He arrived at the course in this study with an acute sense of how he crafts his takeaways from wilderness ventures. He brought an assured and positive sense of authenticity to the course with him. That is not to suggest that he did not also arrive with an open mind; quite the opposite, in fact. The data showed that his authenticity allowed him to open up broadly to the wilderness immersion as well as to the course offerings. His perceptions were complex and informed. It was as if his perceptions of the setting were the highest block in a stack of blocks that he had built over the course of his years of experience. The participants demonstrated a wide range of feeling comfortable with their truest selves, however, and that impacted how they (a) perceived the environment; and (b) the beliefs, values, and commitments that were fostered as a result of those perceptions. The more comfortable that a participant was with allowing his true self to be revealed, the more outright they were in revealing their perceptions of the place. Inversely, the less comfortable that a participant was with allowing her true self to shine through, the more readily the experience fostered emergent beliefs, values, and commitments. In this study, the participants' age played somewhat of a factor in how this was demonstrated.

Dane was the inverse of Stormy in this regard. She made for the most difficult participant for me to frame and to articulate a description of her perception. She arrived at the course so open, so investigative, and so imaginative of the possibilities of the experience that the reader may recall from Chapter IV that I felt it necessary to take a step back at the commencement of my description of her perceptions in order to explicate, in the description, the individual process of data analysis that I resorted to in order to search for a way to describe her perceptions. She



also came to the course with the least amount of wilderness-based experience. She had accomplished a good amount of travel in various recreational venues across the United States over the course of her 19 years, but her travel was primarily limited to front-country experiences. Due to the fact that she likely knew less about what to expect in the course at hand, the perceptions of the place that she revealed were likewise more indeterminant than those of some of the other participants. Her experience in the desert canyons that she underwent in this study may be likewise considered a building block in her foundational knowledge of wilderness ventures and concept, but instead of one on top of a large stack of blocks, it may be one of the first. She was much more straightforward, however, in her resolve that her time in the desert canyons fostered concrete beliefs, values, and commitments, whereas Stormy was vague to the point of near indeterminate if this one course had much at all to do with fostering beliefs, values, and commitments. With Stormy, his time in the canyons more so furthered those than fostered them. Even that furthering was to a much less extent, as he revealed that he held a complex and dedicated set of beliefs, values, and commitments prior to being in the course in this study. The range between Stormy and Dane was general in this regard; and all of the other participants fell right in line with, or somewhere in between these two in terms of these findings.

### **Great Appreciation**

Dewey (1910) noted that “pupils wake up when something beyond their ken is introduced, while they remain apathetic in considering the familiar” (p. 222). The study of participants’ beliefs, values, and commitments is a byproduct of awakening students to something other than what they are accustomed to, which, in the case of this study, was the inner spaces of difficult-to-access desert canyons of the Colorado Plateau. In order to further illuminate the reader’s understanding of the participants’ perceptions of the desert canyons, and

also to address the second research question, I present the beliefs, values, and commitments fostered through their experiences. Academic philosophers debate over the very meaning of belief, and whether belief is conscious, unconscious, or somewhere in between (see Coleman, 2021; Crane, 2017; Pitt, 2009). There is also debate in the field whether belief leads to values, and if commitments are the following of beliefs. For the purposes of this study, I utilize definitions from sociologists, leveled with definitions from the dictionary. The measurement implications add deeper focus on how I have chosen to structurally report upon the participants' beliefs, values, and commitments in this study.

In varying degree, depending on the participant, the desert canyons fostered and/or furthered the participants' persuasion towards these feelings. Researchers have long documented students' takeaways from wilderness adventure programs (Berman et al., 1995; Ewert, 1983; Hunt, 1999; Kolb, 1988; Loeffler, 2004; Mortlock, 1978). Mortlock (1978) was one of the early researchers of programs that utilized adventure in outdoor settings, asserting that combining adventure in the outdoors may, "help people mature through experiences which promote: physical, cognitive, and emotional growth; respect and love for others; and awareness of and respect for the environment" (p. 1). Pursuits within outdoor places are uniquely able to provide some of the most meaningful experiences, he continued, because they involve, "risk, a healthy degree of fear, and uncertainty about the final outcome" (p. 1). Following the early research on the subject, Hattie et al. (1997) identified 40 outcomes in students drew forth from Outward Bound course, which they narrowed to 6 more encompassing categories, "leadership, self-concept, academic [improvement], personality, and interpersonal [behaviors]" (p. 47). Studies like these framed adventure education as contributive to students' intellectual and moral well-being. Around this same time period, however, it was reported that the published literature had

revealed few insights into the role of adventure programming in relation to participants' relationships views in regard to the environments in which they studied. (Hanna, 1995). Few studies demonstrated a relationship between adventure courses effecting participants affinity toward nature or wilderness settings; in fact, Haluza-Delay (1999) went as far to posit that "adventure education may promote an adversarial relationship with the natural world as a place against which to test oneself" (p. 130).

In order to suggest responses to the second research question, this study was an investigation of both sides of this research coin: I first exacted a toll of the themes of the participants' feelings that came forth from the data; and from that information I cross-referenced the themes again with the data to place them into categories of beliefs, values, and commitments. This study thereby investigates both the emotions of the participants, and also the deeper feelings that were fostered as a result of their connection with the environment. As the participants' emotions were overwhelmingly appreciative, I have entitled "appreciative themes." There were three main appreciative themes: those of the participants' personal gratitude, those of the place, and those of other people, which I have thematically entitled "respect" (see Table 1). The following three sub-sections address the specific individual parts of research question two. I draw upon scholarship, the perceptions as described in Chapter IV, and additional data to provide responses to the three questions layered within research question 2: (a) What beliefs...; (b) What values...; and (c) What commitments...; do students foster in response to their perceptions of wilderness immersion?

**Table 1***Appreciative Themes*

Personal	Place	Respect
<ul style="list-style-type: none"> <li>• Accomplishment</li> <li>• Engagement</li> <li>• Novelty/Contrast</li> <li>• Personal Growth</li> <li>• Presence</li> <li>• Spirituality</li> <li>• Mental Healing</li> <li>• Fortunate/Privilege</li> <li>• Exciting</li> <li>• Confidence</li> </ul>	<ul style="list-style-type: none"> <li>• Awe</li> <li>• Desert Canyons</li> <li>• Ecosystems</li> <li>• Environmental Ethic</li> <li>• Fear of Loss</li> <li>• Risk</li> <li>• Humility in Relation to Place</li> <li>• Sensory Stimulation</li> <li>• Spirituality</li> </ul>	<ul style="list-style-type: none"> <li>• Cooperation (Openness to Others &amp; Collaboration &amp; Connection &amp; Leadership)</li> <li>• Future Plans to Visit</li> <li>• Leave No Trace</li> <li>• Sharing with Family/Friends</li> <li>• Solitude</li> </ul>

***What Beliefs Do Students Foster (or are Furthered) in Response to Their Perceptions of Wilderness Immersion?***

**Wilderness Places Need to be Protected and Accessible.** Petersen and Hultgren (2020) asserted, “In the United States, the extractive ideology has left designated wilderness in a particularly precarious state. Areas of actually-existing wilderness are imperiled, perhaps now more than ever” (p. 223). All of the participants in this study demonstrated some understanding of this fact, whether they’d read any of the contemporary literature of the subject or not (and a couple of them had, while most of them did not seem to have done so). Reflecting upon her experience in the course, Adriana expressed that she thoroughly enjoyed the technical aspects of the course, but that her time in the canyons left her feeling, “more my love for wilderness...than canyoneering.” Every student referred to, in some way, that wilderness places merit protection. Dane stated that, “I’d want to these places to be protected and any way we can.” Andrew asserted that wilderness places, “should be protected 100 percent,” adding moments later that, “the desert ecosystem is very, very fragile to begin with, and it needs to be protected more.” June said that

her experience fostered, “a renewed sense of awe and understanding of why nature is so important and why should we protect it.” June built on past experiences to renew, as she put it, her belief in the importance of the protection of wilderness places, while others, as in the case of Dane, may have fostered this very belief for the first time during the course in this study. Regardless wherein the continuum of experience this belief was fostered among the participants, the data demonstrated that their time in the desert canyons promoted this belief, whether for the very first time, or for the hundredth.

In an that illuminated the debate between two factions of wilderness advocates, Petersen and Hultgren (2020) described ‘wilderness realists’ and ‘wilderness constructivists.’ Realists, they discussed, advocate for wilderness on the merits of its attributes of non-human harmony and tranquility, while constructivists advocate for a wilderness in which the trappings of human civilization are inevitably linked with the places themselves. Realists consider wilderness as “a place of solitude and renewal where we shed the trappings of civilization, commune with the sacred, and tread lightly so that non-human lives may flourish.” Constructivists consider wilderness as, “a concept laden with human values, bound up in exclusionary discourses of race, gender and nationalism, and of little practical help in a period where the imprint of humanity is ubiquitous” (Petersen & Hultgren, 2020, p. 222). As oppositional as the two factions are on the subjects of meritorious uses and thereby structural organization of wilderness places, there is one piece that they do not debate: the belief that all wilderness needs to be accessible to everyone. The historic and, leading to, the contemporary narrative about the complications in access to wilderness areas goes beyond the scope of this study. It is telling though, that even two groups in such philosophical opposition to how wilderness should be used can still agree that everyone should have access to use it. The data in this study demonstrated that the participants likewise

had fostered the belief that everyone should have access to wilderness places, now and into the future. Steve said it bluntly. “BLM is public, right? Everybody should have access to it.” He, as described in Chapter IV, had well-formulated views on wilderness access; and even conceded that, as an NPS ranger, it may one day in the future be within his scope of work to craft solutions to the array of contemporary access issues. During my interview with Dane, she posed a rhetorical question that speaks to this issue. Wouldn't it be awesome, she queried, “if a place like Medieval Chamber could be around for many years, so other people can feel that same wonder [that we felt], seeing it [into the future]?” A reflection on Dane's inquiry fittingly sums this discussion. Alongside the other participants in this study, she believes in the meritocracy of protecting, and providing access to, wilderness places.

**We Are Very Small Comparatively to Wilderness Landscapes/Earth.** The participants in this course expressed admiration for the desert canyons when reflecting on their experiences. The photographs that they took prompted memories of being within those landscapes. Those memories fostered feelings that were expressed as the believing in their own smallness, in the sense of physical size. In another sense of the belief, however, the participants referred to the complexity of the environment in which they were immersed. The intricacies of the desert ecosystem likewise stimulated feelings of reverence in light of their diminutive statures as mortals within the ecosystem. Reflecting upon his Medieval Canyon photograph (Figure 14), Andrew ruminated that, “It just makes you feel so tiny when you're standing up just in this massive rock feature,” continuing, “it just shows me that I'm really just a little speck on the scale of life and everything that's happening it's like we're here in this canyon exploring it so and how it is but that's only a little tiny bit of what's going to be happening with this canyon.” Jay reflected that, “this part of the canyon really showed me that it's really the canyon itself is

technical. It just has its own ecosystem but it's got its own pools of water and everything or just everything's doing its own thing without human involvement.” Jon Buck said that he juxtaposed his Day 2 photo (Figure 22), the one with June in her yellow shirt within the picture, to another exact photo that had taken, but without June in the picture. “And then you put Maggie into the perspective,” he marveled, “and you're like, oh my god, those rocks are absolutely massive! It’s kind of crazy to see just how big Mother Nature is.” Reflecting on her Tierdrop Canyon picture (Figure 26), Adriana wondered that “the canyons and the rocks definitely put in perspective how small I am up against the giant walls.” Stormy commented that he loved his Morning Glory Arch picture (Figure 30)], “because it's like a position of the arch and perspective you would not otherwise see where you're hiking,” continuing, “and it also shows you the scale of the people and how small we all are compared to this stone feature.” Steve likewise commented several times throughout his interview that the smallness of his cohorts in the course was a prevalent aspect in his pictures, and that it brought him to “feel a reverence for the landscape.” I asked him how this shaped his belief system. He responded that it brought him to reflect upon, “Just how small we are in comparison to the natural landscape.” The data yielded a plethora of participants’ references to how the desert canyon landscape fostered a belief in their diminutive statures in comparison to the place.

Surprisingly, the elicitation of this belief having been fostered as a result of wilderness immersions in other studies is not well-documented in the literature. While many works cite participants’ feelings of personal accomplishment, camaraderie and teamwork, an overarching connection to nature, a sense of adventure, risk-taking, skills development, and leadership development, among other qualities (see Asfeldt & Hvenegaard, 2014; Hattie et al., 1997; Ingman, 2017; Kalisch et al., 2011; Laraway, 2018; Lien & Goldenberg, 2012; Orams, 2015;

Ramirez & Allison, 2022; Sibthorp, 2003), my searches yielded only one study that demonstrated that the environment in which the participants were immersed fostered beliefs of their smallness. Morse's (2014) study of participants on a wilderness river journey in Tasmania elicited similar beliefs to the participants in this study: "Although participants' interactions with what we might call the 'macro-landscape' produced a sense that the place existed as an independent entity, it was also apparent that micro-worlds consistently engaged participants and provided them with a further sense of a 'something other'" (p. 48). The subjects in Morse's study likewise fostered feelings of reverence for the sweeping landscape, but also an appreciation for the microscopic ecosystems that comprise the larger place. While Morse's example, alongside the findings of this study, are relevant examples of where the landscape fostered students' beliefs of their own smallness within the universe, I still find it surprising that more studies have not yielded similar findings. I will discuss this more in the recommendations section of this chapter. In this section, I revealed the findings in relation to the beliefs that were fostered or furthered within the participants as a result of their wilderness immersions. The next section details values that were fostered or furthered as a result of their wilderness immersions.

***What Values Do Students Foster (Or Are Furthered) In Response to Their Perceptions of Wilderness Immersion?***

As reviewed in the previous section, many past studies of outdoor and adventure educational experiences (Asfeldt & Hvenegaard, 2014; Hattie et al., 1997; Ingman, 2017; Kalisch et al., 2011; Laraway, 2018; Lien & Goldenberg, 2012; Orams, 2015; Ramirez & Allison, 2022; Sibthorp, 2003) have outlined a host of values that are fostered within participants as a result of their exposure to the outdoor setting. Many of these are oft-repeated. Researchers in this field, however, will find it no surprise that participants' feelings of personal



accomplishment, camaraderie and teamwork, an overarching connection to nature, a sense of adventure, risk-taking, skills development, and leadership development are among the most common values that I came across again and again throughout my research of outdoor and adventure education. A moderately-sized analysis of research on outdoor learning determined that, “attitudes, beliefs and self-perceptions” of participants were influenced by participation in an outdoor program, expounding that examples of outcomes include “independence, confidence, self-esteem, locus of control, self-efficacy” (Rickinson et al., 2004, p. 6). The second range of outcomes that this study identified were, “personal effectiveness and coping strategies,” including in this category, “interpersonal and social skills – such as social effectiveness, communication skills, group cohesion and teamwork” (p. 6). I will simply state that every one of these outcomes were likewise findings within this study. In order to focus the breadth of this project, however, I have chosen to emphasize the values that were cultivated throughout the participants as a product of their interaction with environment that were more unique in their occurrence. I have labeled these values Wonder that Cultivates Mindfulness and A Value That Cannot be Labeled.

**Wonder that Cultivates Mindfulness.** Zink (2005) wrote, “Students are said to learn from experience in outdoor education, yet what they say they learn is not always taken seriously” (p. 14). In “Maybe what they say is what they experience: Taking students words seriously,” the author challenges outdoor educators and researchers to take outdoor education students’ words at face value. In this study, the participants said things that were so remarkably on the mark of my preconceived notions about students’ common takeaways in regards to the values fostered from their time spent within wilderness environments that it was almost difficult to believe the things that they told me. Andrew divulged,

Anytime I get out into the wilderness, I enjoy the solitude from other people, and just the busy life and rush that I feel in the city. So, it's a time where I can actually calm down, reconnect with my core, realize that this is actually what it's about. It's not about being in a busy constant. It's about going at your flow, finding different ways to solve the problems presented in front of you, and then also enjoying it while you're doing so.

Morse (2014), described this of research participants who traveled through a remote wilderness river in Tasmania. “Many participants described a lack of distraction as contributing to the ways in which they were able to pay attention,” he documented, “The length of the journey, the remoteness of the river, the physically enfolding qualities of the landscape and the lack of social intrusion all facilitated participants’ ability to pay effortless attention to the surrounding environment” (pp. 52-53). Jay’s comments about his immersion in the desert canyons mirrored the sentiment that Morse unveiled. “I think the wilderness is a very like raw emotion,” he recounted, continuing,

It takes you away from the very modern human treated problems and it's a wonderful place to be. So being there you need to give the respect and take the precaution to enjoy it properly. But it takes me away to a different part of life, and I feel like because the wilderness has always been that for me. I love enjoying just observing the earth being with the earth without human interaction or destruction.

In this section, in respect to Zink’s appeals to educators and researcher to take a step back and listen to the students, I propose that we take- like the participants listened to the desert canyons- their words to mean exactly as they have been spoken. In the remaining parts of this section, I offer excerpts of the participants’ expressed sense of wonder, which directly led to the expressed value of mindfulness.

I asked June about her U-Turn Canyon picture (see Figure 1). “I think there's a sense of wonder and awe,” she responded, “the sense of wonder at how beautiful this landscape is.” June admitted to the canyons inspiring the feelings of “wonder and awe.” The photographs that the participants submitted may even stimulate these feelings at some level within the reader of this study; but regardless of that, these sentiments were repeated in all of the participants’ interview narratives. Stormy shared the feelings that his Morning Glory Arch picture (Figure 30) inspired within him. “Wonder,” he began, continuing,

Kind of this like, I guess the emotion you might feel if you like, find a box of chocolates hidden in in like the back of the kitchen door or back the kitchen counters like ahh! Just excitement like that! Your ability to access something, you know, and, holy cow, kind of beyond indulgent, I guess...I remember feeling a lot of joy, and excitement, and I was like, wow, it feels like I'm entering the Land Before Time on some sort of you know, exciting movie or something, the perspective. Yeah, a wonderful perspective!

Steve had a similar perspective of the wonder that the canyon environment stimulated. He referred to his Day 4 picture, recounting that he felt like he was on a fantastical adventure in a faraway land. The picture, he reflected, “gives me like the feeling of escapism, like we're on a journey we're on an adventure; we're exploring a new land, and the excitement that comes along with it as well as the mystery that could be around the next corner.” The fantastical wonderment of the environment struck a note with nearly all of the participants. Andrew marveled at the size and density of the cryptobiotic soil in Medieval Chamber Canyon, of which he'd never seen in such undisturbed, wild, and raw form. He described the areas covered in the magical soil as looking like small hobbit-like villages, which he called “Little Village-looking plots of crypto.” Dane likewise spoke endearingly in terms of the wonder of the desert canyon environment,

stating that it reaffirmed her spirituality. “It just kind of like leaves me in awe of the Lord's creation...it invokes a sense of His being and His power,” she confirmed.

The participants in this study attributed these meaningful experiences to contributing to their mindfulness, and it came in many forms- indeed in eight forms- but related enough that I have categorized them together. Jay felt compelled to being mindful of his surroundings in the way that he would while visiting someone else's home. Within the canyon environment, he reflected, “I feel a little bit more of an outsider. You know, I live in communities and neighborhoods and stuff and it's a lot of human-made things.” He described the respect that he paid to being in the canyons felt to him, stating that, “it feels like you're in somebody else's house or in somebody else's neighborhood.” He described that he felt like there were boundaries that he was respectful of, as, in that place, other forms of life depended on the ecosystem remaining intact. Jay was careful to be mindful of the property on which he treaded.

Adriana described a more orthodox value of mindfulness: “It definitely gave me [the space] for my brain to focus on our surroundings, and like just being in the moment for the experience, you know, not being like distracted by other things that might be going on around us.” Her valuation of mindfulness resonates with a study that explained a similar phenomenon. “While a sense of ‘solitude’ was a common thematic descriptor for meaningful experiences,” Morse (2014) explained, “Solitude was not described physically but, rather, as a mental state that could occur in close proximity to others” (p. 53). Likewise, Andrew was immediately surrounded by Hannah and other students immediately upon taking his fall. But in that moment, he described a state of mindfulness. He recounted that the only thing that he could remember in than moment were senses. “I could smell the rope,” he recounted, “because it got hot. It produces a nylon kind of smell just from rubbing on the leather gloves with the rope.” He remembered, “just sitting

there, I could smell that smell, and then I could feel the dirt around me that I had landed in.” I prodded Andrew about this a little during his interview, because everyone else who was at the bottom of the rappel at that time recalls it as somewhat chaotic, but Andrew, in that moment only remembered the smell, and sitting peacefully in the dirt.

In yet another way of valuing mindfulness, Jon Buck gazed at his Day 3 picture, which was taken from very near where Andrew’s fall took place. Jon exhibited a high level of enthusiasm for risk, challenge, and existential reward. During his interview, he felt comfortable sharing his pleasure in adrenaline-inducing undertakings. Some readers will commensurate with this, although unfortunately, it is frowned upon in some circles of judgmental assessments of outdoor pursuits. This author does not subscribe to such judgmentalism; and Jon, did not exhibit any reckless, adrenaline-inducing behaviors in the course within this study. Ewert and Hollenhorst (1990) cited Mitchell on this paradigm: “When risk and challenge are experienced at optimum levels,” they asserted, “the adventure recreationist values these responses” (p. 30). Jon displayed an appreciation for risk and challenge being experienced at optimum levels. “I felt like I was connecting myself a lot with the earth. I mean, doing stuff like this, I mean, being super exposed to the elements, and one wrong move and you could fall to your death,” he explained. And in another reflection, he described the exit of Tierdrop Canyon as, “one of the most beautiful views...on the entire trip. I remember I mean you could see all of Arches National Parks, the Balancing Rock way out in the distance from down there. So, it was absolutely gorgeous.” Having had a taste of the adrenaline-induced side of mindfulness in my life, in this study, I must foster an appreciation in the reader for a style of the value of mindfulness that many may not understand. “I just loved where I was at in that moment,” Jon recounted, adding that “I just gained such a greater respect for the environment that I was operating in.” The

differences between the ways that Adriana, and Andrew, and Dane, and Jay, and Jon, and June, and Steve, and Stormy, had continued to foster the value of mindfulness as a byproduct of their respective time spent in the desert canyons of the Colorado Plateau during this study were incredibly distinctive, but the data illuminated those differences at the same time that it delineated them.

**Group Bonding.** Ewert's (1991) study entitled "Group Development through Experiential Education: Promises and Delivery" found, "

One of the major tenets underlying many experiential programs is that well-functioning and effective groups will develop from collections of strangers. In many cases, this is considered a desirable outcome since...many things in our society can now only be attained through the efforts of groups rather than just individuals. (p. 125)

Holding with Ewert's assertion this has been a goal of outdoor adventure programs, much of the research has demonstrated that some version of "teamwork" or "camaraderie" has been a prevalent finding in participant experiences of courses within that genre. Lien and Goldenberg (2012) asked subjects in a college wilderness orientation program to rank the program goals, finding that "teamwork" received the highest mean scores (p. 261). Ewert (1983), in an earlier work, avowed that, "the nature of the adventure experience is such that it can, and often does, have a kind of bonding effect on the participants" (p. 40). Ingman (2017) defined the bonding that took place between students on three separate adventure programs as "togetherness."

Ingman (year) explains that togetherness, "represents a growing sense of community across the participants at each site of study, made possible by the challenges, shared experiences, and group-oriented tasks common in [adventure education]. This sense of camaraderie and kinship

manifest in different ways...” (p. 253). The participants of this study within the desert canyons likewise supported this long-held theory.

Loeffler (2004) called it “connection with others.” Rickinson et al. (2004) labeled it “teamwork.” As detailed above, Lien and Goldenberg (2012) also called it “teamwork,” while Ingman (2017) defined it as “togetherness.” Asfeldt and Hvenegaard (2014) labeled it “group living.” Laraway (2018) called it “shared experience,” while some of her students called it “camaraderie” (p. 63, 89). In this study, Dane called it camaraderie, and referred to the trust that was quickly fostered among the group. She iterated how surprised she was at how quickly the group bonded, attributing it to the setting. “It takes a long time to build up trust in a more urban area,” she reflected, “as opposed to a wilderness area, where it took only a couple of days.” It was difficult to pin a name on the bonding that took place during the course, even re-visiting the participants’ photographs and interviews repeatedly. It was a connectivity, teamwork, togetherness, group living, shared experience, camaraderie, and more, all wrapped up into one thing. There was and were openness to differences, cooperation, collaboration, authenticity, commonalities, basic humanity, and as Adriana straightforwardly put it, everyone on the course was simply “bad-ass!” The participants’ words, their photographs, alongside my participatory observation within the course, illuminate something deeper than a term can convey. I have chosen, therefore, to call it “a value that cannot be labeled.” Many examples of this value exist throughout the data, and I have illustrated one from Dane and one from Adriana above. The next paragraphs highlight some of the remaining six participants’ references to their relationship to the rest of the group as a product of their experiences in the desert canyons.

I found that most of the group enjoyed, as Dane expressed above, seeing the group come together so quickly and with such a strong bond. Jay reflected that, “I think we all kind of started

in our own place, and eventually grew into a team.” He remembered enjoying watching everyone in the group trying to make it through the Medieval Chamber rappel without getting wet.

“Working as a team [to make it through],” he reflected, “was a great opportunity.” Andrew reflected on his first picture (Figure 14), appreciative of the fact that he and his classmates were “just group of people who are all eager to be out there, who want to be there. You have people sharing something [that we all] love.” June reflected that, “When it comes to the individual relationships, it really brings everyone together because when you're in the canyon, you have to all be going for it. You can't really turn around. So, it builds a strong sense of camaraderie pretty quickly, which is really cool. You get to know people really well in a very short amount of time.” Jay reiterated this sentiment, stating, “it's more intimate interaction with the students and everybody involved,” continuing, “and very hands on in a way that you really feel really feel immersed in it.”

The participants demonstrated familial-like concern for everyone else's well-being. Andrew took his high-speed slide down the rope on Day 2 (see Chapter IV: 41 Seconds), and by that time, the group had formed a close-knit bond. In the interviews, every participant mentioned their concern for him during that time. Steve remembered how everyone came together when Andrew took his fall: “[Stormy and I] came back to the group, and Hannah was working with [Andrew].” Having not witnessed the incident, Steve explained that he immediately became worried for Andrew” “He was like, sitting on the ground still, so that was kind of concerning, especially since we didn't see what happened. I was a little like, oh, what just happened? I was thinking, oh no, is he okay? I was concerned for his well-being.” Jon Buck detailed the incident, saying that when it happened, “that absolutely made my heart drop,” and upon finding out that he



was not seriously injured, let out, “a big sigh of relief,” but adding, “it’s kind of got a range of emotions going.”

The participants also described how they worked well together, respectfully, and in good spirits. Jon styled the team as a group that worked well together in moving through the canyons efficiently and with naturally-occurring, shared leadership, that everyone respected. He explained how the group was lighthearted. “I would kind of look at everyone, and everyone is just having a smile on their face,” he reflected, “and you kind of get a good sense that everyone was happy with the amount of knowledge that they learned throughout the trip and we were all moving efficiently and properly, and moving with conviction.” Stormy described his experiences in multifaceted components. He explained that the group had to “rely on each other's thinking and kind of think together and figure things out together.” He went on to illustrate a deeper connection, and also a dysfunction, of groups; but demonstrated that with this particular team, in this timeframe, the dysfunction worked out. He explained it in his interview:

This is a feeling of groups, which is just like a feeling of having to submit to some things that are not always what you want. Or what you would do a lot. And so that dynamic team is important. It keeps you humble. It keeps you connected, but it can also be like a lowest common denominator, like you may be limited sometimes by someone's perception, or someone's interpretation of the facts.

Throughout their narratives, the participants repeatedly demonstrated that they valued the affection and collaboration that developed during the short time span of the course.

The participants came together in support for one another in times of challenge. Dane described that everyone was, “open, and we just worked very well together as a group. For some reason, personality wise, or mindset. I'm not really sure, but it just developed very well.” The

mindset, or openness, that Dane explained assisted the group to navigate several issues. The most salient incident was when June, who had undergone a terrifying exposure to technical canyoneering a few years prior, had to make a decision about the final day's canyon choice. Up until a day or two before the final day, only the instructors and June knew about June's prior incident, where she'd been forced to go through canyons that required underwater submersion. Not doing so would have prevented her making it through the canyon in which she was in with a group; but the underwater passages were essentially forced upon her without choice. The final canyon on the participants' course in this study, Rock of Ages Canyon, required some wading in tight spaces, at times up to neck deep, or in spots, overhead for seconds. June was apprehensive, so the instructors allowed her to choose the canyon on the final day with no judgment, and without the knowledge to the rest of the course that she was involved in making the decision. By the time that the decision needed to be made, however, June had brought it up with the rest of the group, without the instructors' prompting. She was overwhelmingly supported by her classmates. She described the experience in her interview:

Being able to, you know, talk to the entire group, and be open about it was incredibly helpful, because I was able to get over this fear and move past that when I didn't know if I would be able to. I thought I was going to have a panic attack [in the pools], but I didn't. And so now I'm ready to [try more of those type of canyons]. Before, I was like, no, I don't want to do it. And now afterwards, I'm like, okay, when's the next time I get to go? So, I was a big step for me to be able to do that, and to comfortably do it. I think that everyone's emotional response, and just willingness to be there for me, was crucial to that.

Just as June valued that emotional support for herself, she also demonstrated that she took a lot away from the experience, and planned to uphold that value into the future. She expressed that she hoped to continue on with adventuring well into the future, and explained how the presence of a supportive group was very meaningful to her. She described her conversations with her classmates as, “without intense pressure, and being able to, you know, talk to the entire group, and be open about [my fears]. It was incredibly helpful.” While the group remained supportive of one another throughout the course, they also had fun, and likewise shared in sadness.

The group bonded in doing silly things when not engaged directly in the course activities. Two participants recalled Jay waiting for lizards to come by so that he could photograph them. Stormy retrospectively laughed at himself after being annoyed that some of the other participants and one of the instructors fell asleep in the sun while he and others were still drying off from wading in the cold water and waiting to rappel down to where they could get into the sun on the final day. In one part of his interview, Andrew said word “fun” in relation to being with the group eight times in the span of two minutes. June recounted a break between rappels, on a canyon ledge, while laughing while thinking about her Tierdrop Canyon picture (see Figure 3):

There are a lot of memories attached to the picture. So, I got down there first with one of my classmates, and we had a chance to explore, but then we ended up sitting in the sun and waiting for everyone else to join. So just the feeling of the warm canyon sun while we're sitting there. All of us just, I think we were playing ‘I Spy,’ eating snacks, and then we ended up all taking a group picture pretending to be a band because we ended up standing all in a row. (see Figure 34)

**Figure 34**

*All of the Students and One of the Instructors in Tierdrop Canyon*



*Note.* Photo courtesy of ‘Hannah,’ co-instructor of the course.

The bonding that occurs on outdoor education courses is in a class of its own, and the value fostered from that bonding remains an area of great interest. I will discuss this more later in this chapter, in Recommendations. As in Chapter IV, we had to leave the canyons at some point, but the value fostered did not end.

There was more than a touch of sadness during this study, not only because of the following narrative, but because of personal losses that one of the participants experienced during the time of the course. In respect for those losses, I will leave it at that; but in my “mostly participant” role as observer of this course, I can attest to the fact that the group came together in

support of the affected participant wholeheartedly. There was more standard, however, from what I have witnessed, emotions that occurred at the end of the course. While reflecting upon her Day 3 picture (Figure 14), I asked Dane what feelings the photo elicited. She paused for quite some time, and then responded, “A bit of happiness, [pause], but also a bit of sadness, because I really it kind of reminds me of the whole group.” She thought for a moment, and then continued, “It makes me happy that I got to meet all these people, but also that because I don't know I'll get to meet them again or that kind of thing.” The bonds that are formed in an outdoor educational experience oftentimes elicit emotional responses such as Dane’s.

In this section, I revealed the findings in relation to the values that were fostered or furthered within the participants as a result of their wilderness immersions. The next section details commitments that were fostered or furthered as a result of their wilderness immersions.

***What Commitments Do Students Foster  
(Or Are Furthered) In Response to  
Their Perceptions Of Wilderness  
Immersion?***

The participants in this study made very few absolute commitments in response to their time spent in the canyons. The participants did make a few notable implicit pledges, however. Steve, as narrated in Chapter IV, had made life commitments to the preservation and conservation of public lands. The canyon experience acted as another building block in his commitment to those interests, but it cannot be alleged that the desert canyons truly fostered his sentiments. Likewise, Stormy eloquently described his feeling about natural environments in general, through the conceptualization of aesthetics, describing his recent experience in the canyons, “I feel appreciative, excited, energized, and inspired by these different opportunities,” he declared; but the data did not demonstrate that the canyon environment in this study specifically fostered any new commitments. A few of the other participants spoke about how the

feeling of accomplishment inspired them to set goals in pursuit of their interests. Jon Buck spoke eagerly of his zeal for outdoor pursuits, calling it a passion, “that I've never really thought that I would be able to find,” adding that, thanks to his passion, he plans to stay strong, focused, and that he wants “to keep working towards and [increasing] my knowledge.” Adriana expressed a similar commitment. Being on courses like the technical canyoneering course, she explained, “pushes me further to have goals of my own, to provide these types of experiences for students in the future.” June’s pictures emanated the sentiment for her that she also spoke of endearingly: how nature is very healing for her, and she stated that she planned to continue to involve herself in activities that get her into nature frequently. Like Adriana, she expressed an interest in sharing nature with others as a profession in the future. “I...think about the mental health aspect,” she articulated, “and how that's one reason why I want to get into the outdoor industry. I want to help people understand the importance of nature and understand the impact that it has on their health.” Dane explained how the technical canyoneering course (although not specifically the desert canyons) inspired her to pursue her the value of connection with others. She said that she was “more devoted to keep doing things [like the course], and getting out there more with different people...and building up relationships.” Four of the participants expressed a “fear” (three of them using that exact word) that wilderness places like the desert canyons may be imperiled by ongoing development. They implied that they were interested in working to protect such places, but without expounding upon the specifics of how they may contribute. Several of the participants mentioned that the desert canyons had re-ignited an environmental passion, vowing to adhere to individual environmentalist actions, such as recycling, conserving water, and, more generally, “respecting ecosystems;” and many of them mentioned their commitment to Leave No Trace ethic in backcountry settings hence forth. The data in this study produced few other

commitments; and even those aforementioned I have chosen to call “implicit” commitments, as there were very few of them, other than the ones detailed here, that were spoken with outright conviction as pledges fostered as a result of this course.

The scarcity of commitments on the part of the participants cannot be attributed to their lack of care, attention, or thought on commitment. I query that it had something to do with the study design – see more on that in “Limitations of the Study,” in the section below. But going to the extant research, I came to realize that a study with a narrow timeframe as this one cannot fully account for the range of commitments that may or may not have been fostered within the students during the course that immersed them in the desert canyons for four days. After all, commitments, wrote Becker (1960), “come into being when a person...links extraneous interests with a consistent line of activity” (p. 32). Consistent lines of activity were not observable in this study, as there was no follow-up research with the participants over any period of time following their interviews, which occurred within a month of them being on the course in the study. Other studies have taken on the task of probing deeper into the commitments of participants of outdoor programs, so I looked to these for some clarity.

Ramirez and Allison (2022) article studied 144 participants who had undergone three to six-week expeditions, 29 years or more years earlier in their lives. The respondents in their study did indeed demonstrate that the expeditions that they’d undertaken as much younger people had fostered many positive characteristics that they attributed to helping them throughout their lives. Clearly, a study such as Ramirez and Allison’s is much more suited to responding to longer-term questions that I initially sought to address in terms of commitments fostered during the course. Gass et al. (2003) interviewed participants from a first-year college student wilderness orientation program at seventeen years after they’d finished the program. The themes found in

their research demonstrated that the program had fostered commitments to (a) challenging their assumptions about self and others; and (b) commitments to life-long friendships fostered through the orientation program. Asfeldt, and Hvenegaard, (2014) surveyed 80 former students of university-based wilderness canoeing expeditions conducted between 1993 and 2007. The surveys were conducted in 2009, so the lengths of time for the participants between when they'd participated in the expeditions and when they completed the surveys varied; but it had been a minimum of two years for all of them. The participants reported long-lasting commitments nature and place appreciation, among others themes. Davis-Berman and Berman (2012) interviewed former students who had undergone one of two wilderness therapy programs, more than twenty years prior to the study conducted. Again, commitments to an appreciation of the natural world, and to close relationships, were cited by the participants as being fostered as a result of the program. The respondents also stated that self-sufficiency, commitment to self-esteem, and appreciation for, as Dane mentioned in this study, "the little things" in life (p. 335). The Davis-Berman and Berman study contains a good literature review of other studies that have been conducted in the aim of analyzing the long-term effects of wilderness programs. The ones that I have mentioned here I found to be the most relevant in terms of discussing the demonstration of commitments fostered by those programs; but for researchers in quest of more general themes that are found in such studies may use that article as a reference point.

### **Response to Research Question 3**

Q3     What do these students' experiences inform us about wilderness immersion as a component of educational programming?

Eisner (1979) advanced, "Virtually every set of educational events ... has certain virtues and certain liabilities. The more that educational criticism can raise the level of discussion on these matters, the better" (pp. 210-211). As I have responded to the first two research questions



within this study, the reader may assess that there were certain aspects of the participants' immersion in the desert canyons that were unique enough to merit deep contemplation, and other aspects of their experiences that were not as unique, warranting less dedication to explication. The matters wrought from this study that I may hope to raise the level of discussion on are those aspects that were more distinctive from others studies of the genre. In reference to the first research question, the focused finding was the intentionality that the participants brought to their experiences in the desert canyons. The second research question yielded explication on the participants' beliefs, values, and implicit commitments. The beliefs fostered as a result of their time in the canyons were that (a) wilderness places need to be protected, and accessible; and that (b) people are very small comparatively to wilderness landscapes/earth. The values fostered as a result of their experiences were (a) wonder that cultivates mindfulness; and (b) group bonding. I could not pinpoint any definitive commitments that were fostered through the participants' experiences in the desert canyons, although the participants implied that the experience caused them to ruminate on both prior-held and new pledges of various sorts. The implications of the above discussions inform the third question of this study, what do these students' experiences inform us about wilderness immersion as a component of educational programming? While there were virtues of the educational experience that the participants in this study underwent, it is my hope to "raise the level of discussion" in the educational community on the two findings that have to do directly with responding to this third question. The first is the finding of the value of bonding in the participants' experiences. The second is a connection to the belief that wilderness places need to be protected, and accessible; the belief that that people are very small comparatively to wilderness landscapes/earth; and the value of wonder that cultivates mindfulness.

These two implications may be addressed on the same front. In the section, *A Value That Cannot Be Labeled*, I delved into many facets of the research that has been done of the theme of camaraderie, teamwork, bonding, openness, connection, collaboration, etc. that has been classified as a finding, and therein discussed, in various types of studies that involved participants in wilderness-based programs. This study also made the finding of that connection that students disclosed as a value of their experiences with others in the backcountry environment. In the sections that have to do with the preservation of wilderness areas, the feelings of smallness within those worlds, and the wonder inspired by those places that leads to mindfulness, I likewise delved into the literature that has made similar findings in the past and/or upheld the theories that I developed around those findings. In both arenas—the students’ connectivity, and wilderness preservation and mindfulness—these students’ experiences do inform us regarding wilderness immersion as a component of educational programming. In that the bonding that occurs between students in an immersive outdoor environment, and the mindfulness that they come to value as a belief in the inherent significance of wilderness places, we may perceive an implication that may be transferable to realms beyond the scope of “outdoor education,” or “outdoor adventure” programs. If these beliefs and values persistently surface in such programs, might they also emerge in educational programs that include similar courses, orientation programs, or structured outings, but that are not singly devoted to outdoor educational aims?

A school, an educational program, or a course that has the goal of inspiring camaraderie, teamwork, bonding, openness, connection, and/or collaboration among students may find that wilderness immersion may assist in accomplishing those goals. As this value has been one of the main findings in not only this study, but virtually in nearly all studies since outdoor pursuits have

been studied, it may be worthwhile for schools not grounded in wilderness immersion experiences to consider offering a program such as this for its students. Consisting of only four days immersion, this study was on the short end of such ventures; but the value of camaraderie/teamwork/bonding/openness/connection/collaboration shone clearly through in the data, as discussed. It may not be an unreasonable venture for schools and/or programs of all varieties to consider a wilderness immersion experience for its students in order to offer them this opportunity that has been time-tested and demonstrated in the outdoor fields. The results may be invigorating.

The same may be proposed for institutions, programs, and courses, etc., looking to instill a sense of experiential comprehension of the wonder of the natural environment in their students. Haluza-DeLay (1999) wrote, “Adventure programs could be an effective form of environmental education,” and that is just one form of comprehension that may come forth from such a proposal (p. 136). It is possible, again, catapulting from this time-tested and demonstrated thematic outcome of outdoor-specific programs, that students from all walks of life may be likewise inspired as the participants in this study, and many others, were to restructure, even if only slightly, their belief and value systems. It would be interesting to view the outcomes of a program very dissimilar from an outdoor program that undertook such a venture, offering students the opportunity of a wilderness immersion, even if only for a few days. Again, this study was only four days in length, and was not as immersive as many, or even most courses and/or programs, even that this author has been involved with; but the outcomes were fairly profound. Sustainability programs; programs seeking to promote mindfulness; programs informing students about a sense of scale; or, as Haluza-DeLay proffered, environmental education programs may consider an immersive venture for their students. Utilizing creative

thinking, and perhaps attentiveness to the specific environment and/or place that an immersive opportunity was offered, a host of disciplines may likewise benefit from the appreciative qualities referred to in this section.

### **Limitations of the Study**

Being that this study was intended to address a very specific realm of student experience, there were limitations to its breadth. I will detail the parameters of this study that I felt limited the scope of detail on the findings herein. There were eight participants in this study. Eight was a good number for studying those participants' very specific perceptions of their wilderness, and I deeply appreciated every one of their contributions to this study. The reader of this study may appraise the range of diversity among the participants, however, in terms the entire range of diversities that the human population collectively holds. In Chapter III, Participant Selection, I detailed how I had aspired to include a range of "culture, gender, class, age, educational background...religious preference and sexual orientation" among the participant pool in my study. I cited Gress and Hall's (2017) study, which detailed the whiteness within studies of outdoor pursuits. Those authors call for a greater inclusion of diversity in terms of all of the noted diversities, while focusing on a diversity in the color of participants in outdoor studies. "This is increasingly important," they noted, "as the future of wilderness in America relies on future generations investing their energies and passion in its existence" (Gress & Hall, 2017, p. 134). The demographic in this study was more diverse than some, particularly given that they were a group of eight, but as the researcher, I believe that a more diverse sampling in terms of color may serve to expand the findings within said study.

Other limitations were not devastating for a study of this caliber, but should be noted. The study was only four days in length, and due to the nature of the technical canyoneering

course structure, the participants interacted with the developed world every day. A four-day course was among the shorter studies in terms of length than most other studies of this nature that I came across. The participants also interacted with the outside world on a daily basis, as the canyons that they traveled through were day trips. While they were still camped within the desert canyons in the evenings and mornings, their experience was different from immersive courses in which the participants are entirely separated from modern infrastructure like roads and towns for days and nights on end. I cannot assess how much of a difference the limitations spelled out here may have affected the findings, but it is worth the readers and future researchers' consideration.

### **Recommendations for Further Research**

Through the process of this study, several themes emerged in regards to students' perceptions of the desert canyon environment. One was the theme that participants in wilderness ventures bring to the surface their truest selves. Another was that the students held shared beliefs and values that were fostered or furthered secondary to their immersion in that environment. Another that it was difficult to ascertain commitments that were fostered within the students as a result of their time in the desert canyons. There was evidence to support that wilderness immersions may be beneficial to students from a range of educational perspectives, not just outdoor ed and adventure programs. Ideas for potential further research have emerged from these findings.

The participants in this study fostered or furthered beliefs about their own smallness within the universe. They expressed this throughout their narratives, as demonstrated in the sections above. Morse's (2014) participants from a remote river journey in Tasmania likewise expressed such views. It was surprising however, that I could find scant additional evidence that corroborated these findings. It may be in the interest of future studies to investigate participants

of outdoor education or adventure that are based in wilderness environments. More thorough investigations of this finding may yield some interesting results that have the potential to reach other outlying disciplines of study.

As discussed in the sections above, participants oftentimes place a high value on the relationships that are formed through the experience of outdoor programs. I described the value of bonding fostered as a result of co-existent wilderness immersion as being “in a class of its own.” There is a unique, almost familial relationship that oftentimes develops during experiences that take place within wilderness settings. In this study, I described the emotions that surfaced when some of the students reflected upon their course. At the most simplistic level, one may think of Tuckman’s (1965) “Developmental Sequence in Small Groups,” which depicts the four general stages of development that groups take during performance-driven endeavors. He delineated those stages as forming, storming, norming, and performing (Tuckman, 1965). This has certainly become a moniker in outdoor education courses, and I have witnessed that process take place many times; but I posit that the bonding that occurs during wilderness-based courses goes beyond that structural ritual. It seems that eternal, as mentioned, familial, and almost transcendent bonds are oftentimes formed on these ventures. Because I found no supporting evidence of this sentiment, I believe that it merits further investigation. In addition to simply researching the phenomenon of the altruistic bonding, I wonder what the repercussions of those bonds are for the participants long-term. This thought leads to the next query.

It was, as discussed, difficult to pinpoint commitments that were fostered or furthered as a result of the participants in this study’s immersion in the desert canyons. I believe that the timespan of the course was too short to accommodate significant findings in this category. As cited in the sections above, there are a few studies that have taken more of a long-term look at

participants takeaways from wilderness immersions. Davis-Berman and Berman (2008) cited “continued calls for the need to document change over time” (p. 328), explaining that more studies need to investigate the long-term benefits and potential disbenefits of wilderness immersions to participants. As this study did not produce any steadfast findings in response to the third part of the second research question, I posit that specifically there is a lack of research on the subject of the commitments fostered and/or furthered resultant from education or adventure-based or wilderness immersion.

The final call for further research stems from the implications of this study, as discussed in light of the third research question. Studies have documented many findings over time on the effect of wilderness immersion on participants within outdoor education and adventure programs, but, as examined, wilderness immersion may also have implications for other educational programs aspiring to achieve bonding among their students. It is unclear to this author how many other programs beyond outdoor and adventure education and wilderness therapy programs utilize wilderness immersion as a component in their programming, so this is the first investigation that requires exploration. What is the prevalence of other programs utilizing wilderness immersion as a component in their programming? The second inquiry would be to address the question, what are the findings of studies that follow participants within programs that are not specifically outdoor-adventure, or therapy-based? It would be interesting to see how similar or unique the findings from such studies might be.

### **Conclusion**

At the commencement of *The Educational Imagination*, Eisner (1979) wrote, “I have attempted to draw on a background in the visual arts that has, for as long as I can remember, been an important part of my life” (p. vii). In light of Eisner’s words, and of his considerable

influence on this work, I offer a similar statement. In this work, I have attempted to draw on a background in wilderness immersion that has, for as long as I can remember, been an important part of my life. I hope that this study does justice to the participants' experience. I have made best effort to formulate responses to the research questions, and in doing so, I can hope that this study makes a relevant contribution to the extant research surrounding this small piece of literature. May this be utilized into the future for the betterment of student experience, and for the collective human commitment to the preservation of the desert canyons of the Colorado Plateau, and to their brethren wild places across the globe.



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APPENDIX A

PERMISSION FOR RESEARCH AT COLORADO  
MOUNTAIN COLLEGE



Permission for Research at Colorado Mountain College  
University of Northern Colorado  
Institutional Review Board  
Greeley, CO

This letter is to grant permission for Jeremy Deem to conduct a dissertation research project entitled *Dissertation: Value as a Venue: College Students' Perceptions of Wilderness Immersion*. The Outdoor Education department at Colorado Mountain College prides itself on cutting-edge educational experiences, and we support work that pushes development of the field. We are also committed to the preservation of wilderness venues so that our students may continue to access those areas in which they thrive, so we are committed also to assisting in research that contributes to wilderness preservation and access.

In support of this research project, we will provide Jeremy Deem access to the students in the Fall 2021 Technical Canyoneering course. We'll allow him to interact with students (with the students' consent,) allow the students to take the pictures while on course that they'll be submitting to Jeremy after the multi-day portion of the course, and will meet with him as needed to discuss the project.

In return, we ask for copies of all written publications regarding this research, and reserve the right to use any and all materials developed as a result of this project and to terminate this research at any time if it is not felt to be in the best interest of our faculty, staff, students, or mission.

Signed,

A handwritten signature in black ink, appearing to read "David Askeland", is written over the printed name.

David Askeland  
College Vice President Summit Campus  
970.989.1312 / [daskeland@coloradomtn.edu](mailto:daskeland@coloradomtn.edu)

APPENDIX B  
CONSENT FORM



## CONSENT FORM FOR HUMAN PARTICIPANTS IN RESEARCH

### UNIVERSITY OF NORTHERN COLORADO

Project Title: Dissertation: College Students' Perceptions of Wilderness Immersion

Researcher: Jeremy Deem, Department of Education, University of Northern Colorado

E-mail: deem7937@bears.unco.edu

Research Advisor: Dr. Christy McConnell, Ph.D., Professor of Educational Foundations and Curriculum Studies

Phone number: 970-351-2438

E-mail: christine.mcconnell@unco.edu

Greetings! I am a doctoral student at the University of Northern Colorado. I am interested in how students perceive their wilderness immersion that is offered as a component of an Outdoor Education course, and what their experiences inform us about wilderness immersion as a component of educational programming. If you are interested in contributing to this field of research, I am offering you an opportunity to volunteer in a study that involves research.

This is the final research study that I am conducting in order to finish my dissertation, which is the final component of my doctorate work in the field of Education. My goal is that your contribution to this study will benefit future Outdoor Education students and will also contribute to the discipline's understanding of the realities of the effects of wilderness immersion as a part of Outdoor Education course. Your experiences and stories are very important.

As a participant in this research, you will be asked to contribute to the study in three ways.

- The first way involves taking at least one picture on every day of your Technical Canyoneering course.
- The second way involves choosing one picture from each day of your wilderness immersion (so, a total of four pictures), and responding to a three question questionnaire about the pictures after the course that I will provide you with.
- After I review your pictures and questionnaire responses, I will then schedule a semi-structured interview with you to discuss your perceptions of the wilderness, guided by

your pictures and questionnaire responses. The interview may be conducted in-person, Zoom or other virtual form, or over phone. The interview will be recorded.

I will also ask you to provide your age, gender identity, and previous wilderness experience. You may choose a pseudonym (a fake name) prior to submitting your pictures and questionnaire responses, and only the researcher (Jeremy Deem) and the research advisor (Dr. Christy McConnell at the University of Northern Colorado) will examine individual responses.

Results of the study will be presented in an anonymous way so that results cannot be linked back to you.

This research is designed so that it does not disrupt, compromise, or manipulate your learning or experience in the Technical Canyoneering course in any way. It also does not incorporate any form of intrusive procedures. The questionnaire prompts are not about sensitive personal matters, but viewing your photos and answering them may evoke memories and thoughts from the trip that are meaningful to you.

Participation is voluntary. You may decide not to participate in this study and if you begin participation, you may still decide to stop and withdraw at any time. Your decision will be respected and will not result in loss of benefits to which you are otherwise entitled.

Having read the above and having had an opportunity to ask any questions, please sign below if you would like to participate in this research. A copy of this form will be given to you to retain for future reference. If you have any concerns about your selection or treatment as a research participant, please contact the Office of Sponsored Programs, Kepner Hall, University of Northern Colorado Greeley, CO 80639; 970-351-2161.

---

 Participant's Signature

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 Date

---

 Researcher's Signature

---

 Date

APPENDIX C  
QUESTIONNAIRE



Thank you for taking the photographs that you snapped in the field, and for providing a bit of detail to add to the story surrounding the photos that you took. These prompts will cover the following topics pertaining to the research questions,

“How do college students perceive their wilderness immersion experiences?”

“What beliefs, values, and commitments do students foster in response to their perceptions of wilderness immersion?” and

“What do these students' experiences inform us about wilderness immersion as a component of educational programming?”

As your real identity will not be identified in the research study, please feel free to choose an alternate name that you would like to be identified as in the study.

Please provide a brief answer to the following questions:

1. What is the alternate name that you would like to be identified as in the study?
2. What day of the course was this picture taken on?
3. Briefly describe the picture (what is it?; where was it taken?; etc.)

Please submit your pictures and brief responses to the questions to Jeremy Deem at [deem7937@bears.unco.edu](mailto:deem7937@bears.unco.edu). I will contact you after receiving your submission and will schedule an interview with you to discuss the photos in more detail. I will offer you gift of appreciation in the form of a \$25 gift certificate from REI when we meet for the interview.

APPENDIX D  
INTERVIEW QUESTIONS





Thank you for taking the photographs that you snapped in the field, and for providing a bit of detail to add to the story surrounding the photos that you took. The following questions regarding the photographs that you took will cover the following questions pertaining to the research questions:

“What perceptions do college students have of their wilderness immersions?”

“What beliefs, values, and commitments do students foster in response to their perceptions of wilderness immersion?”

“What do these students' experiences inform us about wilderness immersion as a component of educational programming?”

1. Personal introduction:

- a. Please tell us the alternate name you have chosen to be identified as for the purposes of this study.
- b. What is your age?
- c. What is your gender identity?
- d. Describe your experience with higher education. (How many college credits have you taken? Have you completed any degrees? If so, what are they? How much of your college experience has been wilderness-based versus more traditional? Explain anything about your previous or current college experience that you would like to share.)
- e. Please briefly describe your experience with technical canyoneering, desert travel, and wilderness immersion prior to this course.

2. The course:

- a. Explain, in your own words, the environment of technical canyons.
- b. Describe the weather during the course. Did the weather have an influence on your experience in the course?
- c. Did you feel that you were encouraged to learn freely during the course? Explain.

- d. Did any frightening events happen during the course? If so, please describe. If so, did these events have an influence on your experience in the course?
3. The pictures: We will now go through the pictures one at a time, and I will ask you a series of questions about each one.
    - a. What day of the course was this picture taken on?
    - b. Briefly describe the picture (what is it?; where was it taken?; etc.)
    - c. Briefly explain why you took this picture.
  4. The perceptions:
    - a. I am going to go through seven senses of the body, and for each one, explain your thoughts about each of the pictures:
      - Sight (Vision)
      - Hearing (Auditory)
      - Smell (Olfactory)
      - Taste (Gustatory)
      - Touch (Tactile)
      - Vestibular (Movement)
      - Proprioception (Body Position)
    - b. What emotions or feelings does this picture invoke?
    - c. What do you think about your own knowledge, or intellect when you look at this picture?
  5. The beliefs, values, and commitments. Now, we are going to look at all of the pictures together.
    - a. What basic and fundamental beliefs that guide or motivate your attitudes or actions do you think about when you look at these pictures?
    - b. What, if anything, do these pictures make you think about in regards to what is important to you in life?
    - c. Does reflecting upon these pictures inspire you to feel more emotionally or intellectually devoted to anything? Explain.

6. The experience:
  - a. How did your experience in the canyons positively or negatively affect your growth as a human being?
  - b. How did your experience on this course compare with other college courses that you've taken?
  - c. What is your overall take on the opportunity to travel through these wilderness settings during this college course?

APPENDIX E  
RECRUITMENT LETTER



Greetings! My name is Jeremy Deem. I am a doctoral candidate at the University of Northern Colorado, and I am looking for students in this year's CMC Technical Canyoneering course who are at least 18 years of age to participate in a research study that has to do with students' perceptions of the wilderness environment during a multi-day immersion in that environment. I've detailed below what your commitment would involve.

As a participant in this research, you will be asked to contribute to the study in three ways. The first way involves taking several pictures on every day of your Technical Canyoneering course. The second way involves responding to some questions about your experience, and then choosing one picture from each day of the field portion of the course and responding to some questions about those four pictures about the pictures in response to a short series of questions that I will provide you with. I will then ask that you send me both the pictures and your questionnaire to me via email within one week of returning from your overnight experience. After I have had a few days to analyze your photos and responses to the questionnaire, I will reach back out to you to schedule an interview. We will then meet, either in person or virtually, to discuss your experience on the course, guided by your photos and responses to the questionnaire in a semi-structured interview.

I will also ask you to provide your age, gender, and previous wilderness experience. You will choose a pseudonym (a fake name) prior to submitting your pictures and journal entries; and only the researcher and research advisor will examine individual responses. Results of the study will be presented in an anonymous way so that results cannot be linked back to you.

This research is designed so that it does not disrupt, compromise, or manipulate your learning or experience in the Technical Canyoneering course in any way. It also does not incorporate any form of intrusive procedures. The prompts in the questionnaire are not about sensitive personal matters, but rather serves to guide you in viewing your photos; answering the prompts in the questionnaire may evoke memories and thoughts from the trip that are meaningful to you.

If you choose to participate in this research, you will also have the choice to use any name you would like to be referred as for the entire study. If you choose to participate, you will get the following benefits as a thank you from me:

- A \$25.00 gift certificate to REI.

Participation in this research is voluntary and in no way will influence your grade in the Technical Canyoneering course.

Sincerely,

Jeremy Deem  
Doctoral Candidate  
University of Northern Colorado  
[deem7937@bears.unco.edu](mailto:deem7937@bears.unco.edu)  
(970) 819-2751

APPENDIX F  
INSTITUTIONAL REVIEW BOARD APPROVAL



Date: 11/18/2021

Principal Investigator: Jeremy Deem

Committee Action: **IRB EXEMPT DETERMINATION – New Protocol**

Action Date: 11/18/2021

Protocol Number: [2110030846](#)

Protocol Title: College Students' Perceptions of Wilderness Immersion

Expiration Date:

The University of Northern Colorado Institutional Review Board has reviewed your protocol and determined your project to be exempt under 45 CFR 46.104(d)(702) (703) for research involving

Category 2 (2018): EDUCATIONAL TESTS, SURVEYS, INTERVIEWS, OR OBSERVATIONS OF PUBLIC BEHAVIOR. Research that only includes interactions involving educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior (including visual or auditory recording) if at least one of the following criteria is met: (i) The information obtained is recorded by the investigator in such a manner that the identity of the human subjects cannot readily be ascertained, directly or through identifiers linked to the subjects; (ii) Any disclosure of the human subjects' responses outside the research would not reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, educational advancement, or reputation; or (iii) The information obtained is recorded by the investigator in such a manner that the identity of the human subjects can readily be ascertained, directly or through identifiers linked to the subjects, and an IRB conducts a limited IRB review to make the determination required by 45 CFR 46.111(a)(7).

Category 3 (2018): BENIGN BEHAVIORAL INTERVENTIONS IN CONJUNCTION WITH THE COLLECTION OF INFORMATION FROM ADULT SUBJECTS through verbal or written responses (including data entry) or audiovisual recording if the subject prospectively agrees to the intervention and information collection and at least one of the following criteria is met: (A) The information obtained is recorded by the investigator in such a manner that the identity of the human subjects cannot readily be ascertained, directly or through identifiers linked to the subjects; (B) Any disclosure of the human subjects' responses outside the research would not reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, educational advancement, or reputation; or (C) The information obtained is recorded by the investigator in such a manner that





the identity of the human subjects can readily be ascertained, directly or through identifiers linked to the subjects, and an IRB conducts a limited IRB review to make the determination required by 45 CFR 46.111(a)(7). For the purpose of this provision, benign behavioral interventions are brief in duration, harmless, painless, not physically invasive, not likely to have a significant adverse lasting impact on the subjects, and the investigator has no reason to think the subjects will find the interventions offensive or embarrassing. Provided all such criteria are met, examples of such benign behavioral interventions would include having the subjects play an online game, having them solve puzzles under various noise conditions, or having them decide how to allocate a nominal amount of received cash between themselves and someone else. If the research involves deceiving the subjects regarding the nature or purposes of the research, this exemption is not applicable unless the subject authorizes the deception through a prospective agreement to participate in such research.

You may begin conducting your research as outlined in your protocol. Your study does not require further review from the IRB, unless changes need to be made to your approved protocol.

**As the Principal Investigator (PI), you are still responsible for contacting the UNC IRB office if and when:**

- You wish to deviate from the described protocol and would like to formally submit a modification request. Prior IRB approval must be obtained before any changes can be implemented (except to eliminate an immediate hazard to research participants).
- You make changes to the research personnel working on this study (add or drop research staff on this protocol).
- At the end of the study or before you leave The University of Northern Colorado and are no longer a student or employee, to request your protocol be closed. \*You cannot continue to reference UNC on any documents (including the informed consent form) or conduct the study under the auspices of UNC if you are no longer a student/employee of this university.
- You have received or have been made aware of any complaints, problems, or adverse events that are related or possibly related to participation in the research.

If you have any questions, please contact the Research Compliance Manager, Nicole Morse, at 970-351-1910 or via e-mail at [nicole.morse@unco.edu](mailto:nicole.morse@unco.edu). Additional information concerning the requirements for the protection of human subjects may be found at the Office of Human Research Protection website - <http://hhs.gov/ohrp/> and <https://www.unco.edu/research/research-integrity-and-compliance/institutional-review-board/>.

Sincerely,



*Nicole Morse*

Nicole Morse  
Research Compliance Manager

University of Northern Colorado: FWA00000784

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## APPENDIX G

DATA ANALYSIS THROUGH THE PROCESS OF PROSE  
EXAMPLE 2: ASTRONOMICAL TWILIGHT

The glow of the rock and the tone of the sky identifies this scene as having been captured in the morning twilight interval. Wilderness travelers, whether acutely cognizant of it or not, oftentimes expose themselves to the six twilights every day. In technical canyoneering course, we awakened and arose from our sleeping pads prior to discernable daylight, most likely during the astronomical twilight phase of morning. This is when the geometric center of the sun is 18 to 12 degrees below the horizon. The National Oceanic and Atmospheric Administration (NOAA) explains this time interval for the lay reader: “In astronomical twilight, sky illumination is so faint that most casual observers would regard the sky as fully dark, especially under urban or suburban light pollution. Under astronomical twilight, the horizon is not discernible and moderately faint stars or planets can be observed with the naked eye under a non-light polluted sky.” (National Oceanic and Atmospheric Administration, 2022). We accomplished most of our driving to the canyon trailheads, and may have started some of our ascents during the nautical twilight interval. NOAA describes this phase as follows: “Begins in the morning, or ends in the evening, when the geometric center of the sun is 12 degrees below the horizon. In general, the term nautical twilight refers to sailors being able to take reliable readings via well-known stars because the horizon is still visible, even under moonless conditions. Absent fog or other restrictions, outlines of terrestrial objects may still be discernible, but detailed outdoor activities are likely curtailed without artificial illumination.” (NOAA, 2022). This would make sense, as we sometimes found ourselves on our approaches with headlamps attached to our hats, still switched on. This picture, however, was snapped during civil twilight, when the geometric center of the sun is 6 to 0 (i.e., sunrise) degrees below the horizon. NOAA describes civil twilight, the one that perhaps more of us are familiar with, as this: “Under these conditions absent fog or other

restrictions, the brightest stars and planets can be seen, the horizon and terrestrial objects can be discerned, and in many cases, artificial lighting is not needed.” (NOAA, 2022).

Wilderness settings necessitate the utilization of daylight for travel, coupled with lower levels of light pollution. The participants of wilderness adventures, therefore, oftentimes experience regular exposure to the three types of twilight. Here, we utilize them to our advantage; and oftentimes, they provide excellent lighting for photographs. Utilizing twilight to assist us to be moving at first seeable light has another advantage, as well. We strive to get going early in case of emergency.

For example, U-Turn Canyon, on the day that Andrew snapped this photo, took our group, by my Gaia GPS recording of the day, exactly seven hours, thirty minutes, and eighteen seconds (07:30:18) from trailhead to trailhead (a loop). We did a lot of teaching and learning this day, so our moving time was 04:03:59, and our stopped time was 03:26:18. Okay. So, if we were to set out on this excursion again, and assuming there is little down time, with this now more experienced group, say that our time to complete the fourth and final rappel and to have hiked the precarious desert terrain back to the vehicle is going to be four hours. We’ll go on a similar day in the future, November 30, 2022. According to “Sunrise Sunset,” a reliable website that offers charts of twilights, sunrises, and sunsets from the past and into the future, the end of civil twilight will occur at 5:26 pm on that day. So, would it be safe to assume that we would take this group out again on that day with enough daylight to accomplish the mission, four hours, beginning at 1:26 pm? That would theoretically give us enough time to finish the canyon with plenty of nice light for rigging rappels, navigating the extremely hazardous terrain and unpredictable weather of the desert environment. If it is not obvious, the answer is no. We set out at first light to account for the what-ifs, the unexpected delays, and the emergencies. As a

lifelong guide and outdoor educator, I am acutely aware that every task in the wilderness setting becomes exponentially more difficult under headlamp – and that’s assuming that we have headlamps and that we don’t run out of batteries. What if the canyon flash floods while we’re in it and we have to seek high ground, unable to move down canyon for six hours? What if we get a rope stuck as we’re trying to pull it, and then have to set up a system to ascend back up a 200’ vertical or overhanging face, locate the snag, get back to the top, re-rig the rappel system, descend again, and then try to pull the rope again? What if it happened twice?? What if someone, navigating the treacherous desert floor, slips and breaks their ankle, rendering them unable to walk, requiring a carry? What if our communication devices don’t work in any of these situations as darkness approaches? Canyons are notoriously terrible places for satellite communication devices, let alone cell phones, to work, ever, at all! I hope that the reader here is beginning to grasp the rationale for savvy wilderness travelers to allow for a margin of error. We set ourselves up for success by allowing the most possible amount of daylight possible; and that is why, not too long after beginning our ascent, Andrew was able to snap this picture, still basking in the civil twilight.

The picture contains people. Student Jay, instructor Hannah, student June, another unidentifiable helmet top. They ascend a crevice formed by the vertical intersection of two sandstone faces. A gully, steep, but not so steep that the travelers require rope, snakes up the edge of the left, more vertical, rock wall. The right face appears reveals the character of the desert walls up close. From afar, as we’ve witnessed in other pictures, the walls are unanimous, sheer and lustrous, with only swathes of differentiating color and grand sections, separated by distinct divergences. But here, submerged at the touchable field of perception, the faces display distinctive subtleties. Textures from light sandpaper to something resembling a tattered, charred

foil; cracks and flakes denotate the ephemeral edges of folds and bends and twists and turns; pockmarks and protuberances of all variety of sizes and shapes exact themselves from all about.

One can imagine what this feels like. Jay's hand is on the rock. At this time of day, on the west face of a round protuberance the size of Jay himself, the rock would be cool to the touch, having not yet received its daily dose of warming sun. It feels like a light sandpaper, call it a 300 grit, or 120 in spots, 40 in others. They navigate through chunks of broken boulders, having calved and lodged in this crevice years, decades, centuries, and millennia prior, now slowly in epoch time weathering away, and in their non-uniform manner of having wedged into place, providing a light challenge to the canyoneers.

Sage-colored bunch grasses appear sporadically up the crevice where they ascend. There is also one small, singular puff of the grass coming seemingly directly out of the sandstone, but more likely out of a minute crack in it, directly to the right of the hikers. Ubiquitous in the desert environment, bunch grasses grow in small clusters, or "bunches," in any opportune place where they can find a bit of water, enough nutrients, and adequate sunlight – or shade – to sustain them. Their clustering stems from an evolutionary process that assists them in scattering from their brethren in order to account for the scarcity of these necessities. Ahead of them all, there is a faint tree. It is too far to make out in this picture, but is most likely a sturdy old juniper, like the grasses impervious to this unyielding landscape. But since we're not too it yet, we'll leave the juniper for another time.

## APPENDIX H

DATA ANALYSIS THROUGH THE PROCESS OF  
PROSE EXAMPLE 3: ALMOST APRICOT



We're standing on the edge of a chasm. The ground at our feet consists of sandstone, a smooth but mildly broken surface, with a few pebbles strewn about. Its color most closely resembles "Almost Apricot," or "Dark Salmon;" but hues of "Terracotta" and "Coral Red" and "Light Red Ochre" also make their appearances in flashes. The sunlit walls beyond this precipice are primarily "Light Salmon," but again, innumerable tones of other named and unnamed tints trickle through everywhere. In the furrows and the folds of the rock, shades of gray to black overtake the rosier daylight sections of the landscape; and speckles of something closer to sun-bleached white shine in spots, as well. Below, in the tiers of canyon beneath us, sages shine in the sunlight and darken in the more shaded spots. And far off, peering between two monoliths that frame the portrait, lies a large swath of sage that must be miles in size. But this all, besides the swathe of sky suspended above the terrain, accounts for little of the scene. If you had to answer the question – what is the color of this landscape? – you'd probably say red; or, if you're a graphic designer, you might say dark salmon.

Of the two sides of the canyon, we have the best view of the one to our left. Domes cap the wall of a nearly sheer vertical face, hundreds, or maybe a thousand feet in height. Shadows perforate the monument, one casting a sizeable diagonal swath across the furthest right side of the scene. Many other medium to smaller shades creep their way across and down the sheer walls, shading perhaps a fifth of the entirety of the viewable face. The bottom of the scene is a ravine, its terminus hidden from view by rock protruding from the bottoms of the canyon walls in extensive ledges, seemingly alike the one that we are standing upon, just hundreds of feet below. A person, a small figure, seems to be descending down a side drainage on the right, her back to us. Even in this frozen moment in time, her body language suggests that she is moving

carefully, cautiously. A small blue helmet rests on her head; and other than that, we know nothing of this figure.

Above the human, the wall that frames the right-hand side of the scene rises up and out of the top of the picture. And to the left of this, the ethereal sky. This blue ceiling oversees the red desert earth below. From this vantage it seems as if the entire world might look like the scene before us.

APPENDIX I

DATA ANALYSIS THROUGH THE PROCESS OF PROSE  
EXAMPLE 4: TECHNICAL CANYONEERING

“I just love how Stormy looks like silhouetted against the sky. Just like how small it makes them both look. And I just remember this being kind of quiet too. We were standing down there. And just kind of like, you know, this was our first major rappel. And I was just like, oh, wow, we were just so amazed by what we were doing. I think that it was like, quiet” (Steve).

This could be maddening to view. A person, “Stormy,” is hanging over the ledge of a vertical precipice, backwards, legs spread wide, apparently holding on to some sort of rope, presumably for stability, and a seemingly spindly one, if that’s the case. Another person, “June,” stands unphased, directly below. *96 feet* below, to be exact.<sup>1</sup> To the untrained observer, this would surely look death-defying; but it’s not. Over the course of four days, the students repeated this maneuver 14 times, over 14 different precipitous cliff faces, in four canyons. In fact, in this scene, June had just accomplished the same maneuver – it is called rappelling; and it is the quintessential skill of technical canyoneering. Rappelling leaves the rest of the world behind, constrained to places where one can only move about without this skill, and to where retreat back is easy, or at least possible. Here it is not. Rappelling separates the world from the wilderness environment with just one quick jump. Pulling the rope from above, the only way out is down; and a truly technical canyon places the traveler between two rappels – a land inaccessible to the walking; the vast majority of the time the climbing; the jumping; and even oftentimes the flying

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<sup>1</sup> The instructors referenced [climb-utah.com](http://climb-utah.com), [ropewiki.com](http://ropewiki.com), and [roadtripryan.com](http://roadtripryan.com) in order to gather “beta,” or information about these canyons and their rappels, any of which may be referenced throughout this study. They list the height of this rappel as 80’, 105’, and 99’, respectively. In the canyons, we checked and discussed the accuracy of their reports. For this rappel, we agreed upon an average of the three ranges of height, and so reported it as 96’.

human world. To understand these students' experience, one must develop a base level understanding of rappelling.

The rappel starts at the anchor. The anchor is a fixed point above the rappel where nylon webbing slings are attached to form a strong attachment for the ropes that will be rappelled down. In the canyons that the students descended in this course, the anchors ranged in type. Many were stainless steel rings that canyoneers have permanently affixed on the face of the slickrock. They drill a hole into the rock, and attach the rings with 3/8" or 1/2" wide, 4 1/2" long stainless steel bolts.

Other anchors were large boulders that rest on relatively flat ground in the landscape. A rule of thumb for boulder size has to do with its weight, which for sandstone equals about 150 pounds per square foot. So, we estimate the square footage of a boulder and then multiply by 150 to approximate the weight. The nine-millimeter wide canyoneering-specific rappelling rope that Stormy is abseiling on in this picture have a weight capacity rating of about 4,500 pounds. So, we tried to find boulders that were slightly larger than approximately 3'x3'x3' (i.e. 4,050 pounds) as a baseline for the smallest allowable size for a boulder anchor.

The trunks of juniper and pinion trees served as anchor points, as well. The trees that the students used grew a minimum of ten feet from the edges of the rappels; they were alive and healthy, and utmost care was taken to allow them to remain that way after our passing; and they were large enough, with an estimated large enough root system to support, again, more than 4,000 pounds. All of the anchor systems include at least two of any combination of these three types of individual anchors creating a redundancy in the system. Slings of nylon webbing were strung in acute angles to form a singular start point from two or more anchors, and then two thick carabiners would be used to sling the rope through.

The rope is then tossed over the edge of the cliff. In some cases, the center point of the rope was attached to the anchor point, the ends of the rope were tied together, and two strands of the rope were left to abseil down. We did this when the rappel height was less than one half the total length of the rope, which is two hundred feet. If one zooms in and look closely at the rope in the picture here, both strands of rope can be seen, an indicator that this rappel was less than half the rope length, i.e., 100 feet.

The next step is to attach oneself to the rope. Donning a nylon harness, which consists of a waist belt and two leg loops connected by a four-inch loop on the frontside of the rappeler in the pubic area. We call this loop the belay loop. Two carabiners are clipped to this loop, one which holds a rappel device, and the other which holds a backup safety catch. This is a small looped rope called a VT (short for the French, “Valdotain Tresse”) hitch. During the course, the students also used another backup safety catch system called an auto-block; but for the purposes of this description, they are so similar that when referring to this part of the system, I’ll simply refer to it as the VT. Proximate to the anchor, the rappeler has been trained to thread the rappel rope through the rappel device. The VT is then meticulously twisted around the rope and re-clipped in to the belay loop. The carabiners are locked, and then a pre-rap (rap is oftentimes used in short for rappel) safety check is performed in conjunction with an instructor at the top of the cliff. The other instructor has already rappelled first, ensuring the integrity of the system and that the rope was indeed long enough to touch the floor of the canyon, and is now monitoring the safety going on the bottom of the rappel. The safety check is spoken aloud, as follows:

- A. Anchors. We re-inspect the anchors to ensure that they are still functioning with integrity.

- B. B: Buckles. All harness and helmet buckles are clipped and secure. All backpack buckles are clipped and not flying loose, and all zippers are zipped shut. All loose clothing is tucked in order so that it will not find its way into the rappel device. Waist belt and leg loops are snug. Shoes are tied.
- C. Carabiners. All carabiners in the system are locked.
- D. Devices. Rappel device is loaded correctly and the rope is running through it in the correct direction. The VT is threaded and clipped on properly.
- E. Edge. The rappeler looks at the edge transition and makes a mental plan for dropping over the edge prior to starting. The edge does not have any sharp edges that have or could compromise the integrity of the rope.
- F. Fireman's. The fireman's belay is a third redundancy in the rappel system, after the rappel device and the VT. In this picture, June is providing the fireman's belay. If the rappeler were to lose control of the rappel device, the VT will stop their descent. If they should also continue to pinch the VT after already having lost control of the rappel device, they would begin to hurtle towards the ground in a fall. If the person in control of the fireman's belay were ever to see this occurring above them, they can simply pull taut on the rope, engaging the rappel device from the ground, stopping the freefall. The rappeler yells (or radios, if it is too far or too loud outside with wind or other noise such as waterfall to be heard without radio) down to the person at the fireman's belay, "FIREMAN'S?" Here, June yells back up, "FIREMAN'S!" indicating that she is aware that he is about to rappel and is now attentive to his descent.

- G. Gloves. Leather gloves are crucial to safe rappelling. On descent, the rope sliding through one's hand can become very hot. The heat can become so overwhelming that rappellers have been forced to drop the rope that is controlling their descent in conjunction with the friction of the rappel device. Therefore, we double check here to ensure that the rappeler is wearing his or her gloves.
- H. Helmet and hair. Helmet is sitting on the head properly, and is snugly buckled. Long hair is tucked securely as not to present any hazard of getting pulled into the belay device or into the VT system.

Now we're ready to go. At this point, Stormy yelled down to June again. "ON RAPPEL!" She yelled back up, "RAPPEL ON!"

Stormy meticulously, slowly backed his way to the edge. His right gloved hand allowed the rope to slide gently through the palm, while his left hand gingerly pinched the cusp of the VT strand. Working the rappel device and the VT simultaneously in conjunction and also versus one another, he achieved a balance in his movement over the edge. In this picture, we are seeing the moment he transitioned from the horizontal world to the vertical world. This is the most difficult, and oftentimes also the most exhilarating, moment in a rappel.

From here he continued to descend smoothly to June's position, placing his feet on the ground and releasing the downhill side of the rope with faint exhilaration, smiling broadly. Merriam-Webster defines rappelling as, "to descend (as from a cliff) by sliding down a rope passed under one thigh, across the body, and over the opposite shoulder or through a special friction device" (Merriam-Webster, n.d.-c). That's a start.



APPENDIX J

DATA ANALYSIS THROUGH THE PROCESS OF PROSE  
EXAMPLE 5: INDUSTRIAL TOURISM

“It’s a moment and a feeling that I’ll never forget” (Jay H).

Jay was the only student in the course who’d never spent time submersed in the landscape of the Colorado Plateau. Arches National Park, with its vast red sandstone vistas that merge with vivid azure skies, drew more than 1.8 million visitors in 2021 (Citation needed, <https://irma.nps.gov/STATS/SSRSReports/Park%20Specific%20Reports/Park%20YTD%20Version%201?Park=ARCH>). But this morning, we’d started at the popular Park Avenue parking lot, donned our packs in the early dawn light and quickly disappeared from the crowd, which had just started to waken on this midweek morning. The ten of us ambled the park road for just a couple of minutes before turning off and ascending into a faint wash that, over the years since I’d started visiting these canyons over two decades ago, now began to resemble a vague, marginally discernible trail. Of course, the footprints in the loose sand of the wash are indistinguishable as footprints to the untrained eye, looking more like divots on a sandy beach; and they would be flattened with every downpour during the summer and autumn monsoon months, with the melt of every dusting of winter snow, and would even be flattened during the spring windstorms of which the region is infamous for. But this morning, Jay was energized, even electrified in his excitement. We disappeared into the desert that quickly – less than a five-minute march from Park Avenue, which during the height of the day would reel with the traffic of persistent waves of smartphone wielding day-trippers, RV’ers, and sightseers of all dimensions. The deceased, controversial author and early Arches park ranger, Edward Abbey (1968/2011), coined the phrase “industrial tourism,” which aptly describes the goings-on in the Park Avenue parking lot:

“Industrial tourism is a threat to the national parks. But the chief victims of the system are the motorized tourists. They are being robbed and robbing themselves. So long as they are unwilling to crawl out of their cars they will not discover the treasures of the national parks and

will never escape the stress and turmoil of the urban-suburban complexes which they had hoped, presumably, to leave behind for a while” (Abbey, p. 64).

Abbey, it has been said (and I’m not sure where exactly, but I’ve certainly heard this again and again in my 24-year career of leading expeditions in across the Colorado Plateau region), would roll over in his grave if he could witness the swell of traffic has overtaken Arches in the years intervening 1968, when he first wrote about industrial tourism, and now, 2021. (Indeed, in 1968, Abbey was encountering up to 500 visitors a day during the busy season at Arches, and the average daily visitation across 365 days now stands at nearly 5000 per day. At the time of this writing, the park service has rolled out a reservation-required booking system that is scheduled to be launched throughout the 2022 busy season – April-October – of 2022 in effort to check the unbridled crowds.) At any rate, knowing the Abbey’s work intimately, and through that, his brusque tendencies, I sincerely doubt that he’d feel any more affection for our intrepid team any more so than the next visitor, but the morning that Jay snapped this photo in his emergent exhilaration (indeed, this picture was taken above the first rappel), when we stepped off of the pavement and in to the arroyo, it felt as if we were entering another world. Here, to Jay, to the students, we are in the wilderness.

APPENDIX K

DATA ANALYSIS THROUGH THE PROCESS OF PROSE  
EXAMPLE 6: SUBLIME MOMENTS

Prior to the students' excursion into the canyons of Arches National Monument and the Moab, Utah, Bureau of Land Management administrative region, they absorbed quite a lot of information about these canyons, and also about technical canyons in general. They learned about where to find "beta" (information) about canyons, and the rating system of technical canyons. Their instructors cautioned them about the unpredictable and sometimes volatile weather of these canyons, and the extreme dangers of flash flooding. They perused information about the flora and the fauna of the region. They discussed logistics and safety; "Leave No Trace" ethics; equipment safety and care; basic knots; signals and communication; and navigation, among other topics. Their instructors counseled them about the possibilities of mandatory submersions and swims. They even performed a rappel, for lack of a better venue with it snowing outside during their introductory sessions, off the stairway balcony in the main lobby of the Summit campus of Colorado Mountain College in Breckenridge, Colorado. But until the moments surrounding when this photo was taken, none of them would fully understand what it meant to be technical canyoneering.

This picture places the viewer at the bottom of the first rappel of U-Turn Canyon (3-A-1) in Arches National Park. Looking back upon his experience, the student who snapped this shot, Jon Buck, chose this photo to submit as his photo for day one of the course. It is more visually unremarkable than some of the other photographs submitted by his classmates for day one, which include vast, powerful scenes of the heart of the Colorado Plateau; but the implication of its inclusion in this study cannot be understated. After all of the leadup and pre-course information and anticipation, here, in this moment, Jon is finally, truly, technical canyoneering, in real life!

He's looking from the bottom of the first rappel, as stated, up at the instructor, who appears to be de-rigging the rappel as it was set up for group use, and re-setting it for his solo rappel as the last one down. Jon is preparing to set the instructor a "fireman's belay," a skill that provides a redundant measure of safety in the rappel system. We can, yes, see the spectacular cerulean sky above, the canyon wall on the lookers left, an overhang on the top streaked with desert varnish. The rope, dually stranded, snakes its way down the drainage crack from the point of the instructor and dangles freely in front of the photographer. It is clearly a desert scene; but Jon portrays the subjective here. He surely went away with a camera full of spectacular desert vistas from this day, but was emotionally charged by this more pragmatic moment in the course. Here, we are, at long last, technical canyoneering. Moments like these can be sublime in the world of outdoor adventure and wilderness immersion.

About 30 years ago, some friends taught me how to whitewater kayak. I was training to be a raft guide at the time, so I knew a little bit about the river – currents, eddies, waves, holes – the basics; and I was learning how to navigate a raft downstream. But my co-trainees and I really wanted to learn to kayak. This was a large part of the motivation for wanting to become river guides in the first place. We'd push rafts full of tourists downstream all summer in order to have a steady source of kayaks to use, to be surrounded by excellent kayakers who'd help us to learn, and to have access to shuttles on the daily river trips full of rafters when we weren't working. It was a dream that motivated a couple of my friends and I to drive 5 hours every weekend to attend training for 4 months; to live in tents and later in shanties constructed from leftover construction materials; to make \$42 a day to start; to move a few hours away from our homes at that time; and to temporarily, at least, to eschew the undergraduate educations that we were working on at the time. The kayaker friends that we made at the river company where we were

training took us under their wings almost immediately. First, they outfitted us with boats and paddles. We made all of the adjustments and made everything fit. As we drove to the swimming pool, they told us stories of their kayaking escapades; and they prompted us to learn from their stories. They counseled us on what to do in many circumstances; how to choose a run that's suitable for us; what never to do; how to set shuttles; what clothes to wear; the unpredictability of water levels; and on and on. At the pool, they taught us to wet exit, then to T-rescue, and then, eventually, to "Eskimo roll." We practiced all three of these skills for days in the eddies at the takeout of the river where we trained. We were ready as we'd ever be.

I wish, that like Jon has from his first moments technical canyoneering in U-Turn Canyon, that I had a picture of my first moments kayaking the Upper New River. The thing is, however, that it would be a picture of the bottom of the river; because when I peeled out of the launch eddy at the put-in, the downstream current of the stream quickly caught the edge of my tiny, squirrely boat, and I capsized immediately. Training went out the window. I gave it about 2 seconds at calling for a T-rescue, having instantly lost my paddle, and then I pulled my skirt and swam out from under the boat. Wow. All I'd dreamed about for the better part of a year was washed away with 6 seconds of reality in the wilderness environment of a Class I+ whitewater river. I remember wondering that night if I'd made a grave life choice mistake! Still, I wish that I did have a picture of that moment for keepsake. I have witnessed the glory of miles of stacks of 20-foot wave-trains on a massive (150,000 CFS +/-) Class V river in the Himalaya; pristine, crystal clear, small-volume waterfall lines in the southern Brazilian highlands; seen a hundred heart-tugging sunrise and sunsets from the Grand Canyon, the Middle Fork of the Salmon, Lodore Canyon. I've had the honor of leading river expeditions across the globe, with clients and with my college students as participants. All of these experiences, in part, are because I know

how to kayak; and I know how to interact with the wilderness environment of whitewater rivers. But in that first moment that I began kayaking, with all of the anticipation behind it, well; it could have changed the trajectory of my life in an instant.

That is why Jon's picture is so meaningful. The moments surrounding this picture may very well be life changing for him. I fully understand why he chose this picture to highlight. There is so much energy leading up to and surrounding this moment, that for Jon, this is where the technical canyoneering, this theoretical, mysterious, fabled activity, actually began. In this moment.



APPENDIX L

DATA ANALYSIS THROUGH THE PROCESS OF PROSE  
EXAMPLE 7: WHAT IS ARTIFICIAL?

Contrails. A trapping of the world outside. Rabbit brush, not. The phrase “rabbit brush” is as far as I can go here. I don’t know, or don’t ever remember, the scientific name “*chrysothamnus nauseosus*” (National Park Service). I’ve never been good with biology, or geology, or really anything scientific. *Navigating* others, and myself, *to places* where they or I might glimpse some rare, pre-historic views of biology, or geology, or fauna, is more my connoisseurship. Anyway, rabbit brush, like junipers, are not a trapping of the outside world. They are native, and I can recognize them and point them out in at least this dull way: “That’s rabbit brush. The ancestral people used it for fuel, making yellow dye, gum, and likely tea. Sometimes it stinks like oil or grease.” I don’t try to hide the fact that my brain doesn’t accept any deeper scientific knowledge about rabbit brush, or like I said, anything. There is rabbit brush in this picture. I wonder if June saw it before she snapped this magnificent photo. It’s yellow; and it’s right behind the gnarled old juniper that’s front and center-lookers-left in the picture. That’s another one that I can share out. “See the grayish-blue berries all over the place? They come from juniper, and they’re used to give gin it’s flavor.” I’ll pick one up and smell it; and most of them will usually follow suit. But I do offer a field guide for students that need more than my rudimentary identifications and descriptions of the plants.

Where there’s a juniper, there’s nearly always a pinion. That’s the little Christmas tree looking one in the foreground in this picture. There’s usually saltbrush too – those grayish looking brushes near to the ground. I think that there’s a greasewood here too, popping out of the lookers left; it could be a blackbrush. The sage colored grass in the front on the lookers left is likely ricegrass; but it could be another grass called needle and thread; it’s hard to say from the picture. We’d plucked some ephedra earlier this day, with thin bamboo-shaped stalks growing out of the crevices on our approach; but there’s none discernible here. Where there’s no plant

growing, the ground is sand; but just to say sand is to oversimplify. It scales from the consistency of pure, slick hard sandstone, which would be any of the flattish walls towering in the image, to a fine powder with the consistency of a very finely milled flour. The flour-like sand sometimes sits long enough, undisturbed by precipitation or wind that it looks and initially feels firm and stable – a small lizard might run across it and leave it unspoiled – but the weight of a human will bust through. If left unmolested long enough, and proximate enough to sustenance but spaced enough from the larger plants, a community of microorganisms called cryptobiotic soil forms, although not positively identifying any here, I'll save a detailed discussion of it for another picture.

Scanning the ground, we see almost everything else in between here – coarser sand, grit, pebbles, chips, stones, boulders. It's all ephemeral, a primeval demonstration of an ancient landscape.

June stated, looking back on the picture later, that she the image conjured the memory of a smell, but that she couldn't quite bring the smell back to her senses. This was a common sentiment among the students. This environment has a smell; and there's no other phrase for it than the smell of the desert. If you've savored satiating outdoor experiences in the Colorado Plateau desert, you are likely similar to June. You know that there is an aroma, but can't quite draw it to your olfactory system's discernment if you're not in that environment. Human evolution has afforded us reasonably accurate representations of images, like these pictures, and also, in some circumstances sounds; but not so much with aromas. The thought of the scent of the desert are partially what draws one back time and time again – it's part of the excitement of prepping for the trip. I wonder if June and the others will be so drawn, as I have. Now let's take a look at the sky, and the contrails.

June placed them in the photo intentionally. "I think there's a sense of wonder and awe," she stated, reflecting on the photo later, "and purposely had the [con]trails in the clouds in the

picture, just to give a little bit more of a backdrop and scale of reference.” “Yeah, just I turned around, saw this, and it's just absolutely stunning – visuals after our last rappel of the day.” She’s right; the visual is stunning by any conjecture. Three distinct contrails streak the radiant sapphire pastel of the sky, which radiates in sharp contrast to the towering monoliths of sandstone below. A few wispy clouds add to the ethereal ambiance of the image.

Several online dictionaries defined contrails as “artificial clouds” (Vocabulary.com, wiktionary.org, classicthesaurus.com). They’re artificial because they are, “created by an aircraft;” and are caused, “either by condensation due to the reduction in air pressure above the wing surface or by water vapor in the engine exhaust” (Classisthesaurus.com). I can’t help but to contemplate the presence of the contrails in this photo. Are they “artificial” clouds? If so, does it matter that they are artificial? We canyoneers have placed ourselves, with a lot of “artificial” things – like ropes, harnesses, carabiners, plastic food wrappers, smart phones, Smartwool, and Patagonia down jackets, for examples – in this environment. But the experience around us is naturalistic. This is, as we conceptualized above, “a primeval demonstration of an ancient landscape,” through which we traveled. But now we have contrails that were placed into this scene by jet- fuel powered aircraft, soaring through space some 30,000 feet above the surface of the earth.

I want to share some students’ perspective on the interaction of these two worlds. As Stormy reflected on the senses that he felt when he snapped his picture on day four, he remembered the sounds. In order to protect the identity of the participants in Stormy’s rendition of these events, I refer to them here as “Subject” 1 and “Subject 2,” and neutralize their gender to she/he:

[I was hearing] sounds [from] another student's speaker phone. And so, during this time, I think Subject 1 was right in front of us right there. She/he kept playing songs. And so I was just hearing this music. And it was funny because Subject 2 was like, 'Oh, my God. You kind of go into nature to get away from all that.' And I was like, wow, like, we are nature. Culture is a part of nature. We're all sort of embedded in it. So, I just thought was funny that she was [commenting on the fact that] there were some very non-native sounds, sounds that were not natural to the *place*, coming out of the phone. I asked Stormy if he would elaborate on this sentiment, which he did:

I just think of the split to say, this is nature and not nature as being... It comes from like, the 19th century, or even the 17th century or...thinking of that opposition [between 'nature' and 'not nature'] a lot stronger, and creating realities and social structures to reinforce that. So, I [in the situation that he described] pushed back, in like, an eco-feminist way... There are so many things we are born into – that we inherit, right? We were being advertised to in our mother's wombs. So, like, we heard advertising before we were outside of our mother's belly, and so there's all of these jingles, songs, gestures, references, jokes, you know, icons, celebrity, like knowledge that we inherit, that we carry around with us. And so, as we are social beings, we are naturally going to like, exude those things. The conversations we have, and even the way we interface with the landscape are always mediated by us. And it's not that like, it makes it any less natural. Although there is a sort of like thinking of purity, that certain aesthetics that the national parks have, like, a mandate to uphold for humans, or the BLM, or whatever. There's, like, some sort of aesthetics that they're ethically and legally obligated to enforce. But...bringing people into these places, they're going to bring themselves, and

then themselves are going to include all of their cultural heritage, whether or not; so, like, getting to a pure natural experience is impossible. From the get go. It's like an aesthetic ideal, or it might be an experiential ideal, but it's like to me it's like, if like, someone playing songs on their phone keeps you from enjoying nature, like, it's like, it's an aesthetic problem. I don't know, it's not a human problem. Like, I don't...I don't know. I didn't see it ruining the situation or ruining the environment. Anyway, and I guess you could argue, if you were to take my line of reasoning and say, Well, what do you say about microplastics and like, people wearing clothing that like, leeches microplastics all along the canyons that you just hiked. And like, even the ropes maybe having like different waste particles. Like, basically everything we touch – this is Octavia Butler – everything you touch, you change; everything you change, changes you. The only lasting truth is change. So, like, there's no there's no like pure, separate environment. There's only our bodies and these other bodies interacting. There's like, a transfer at every stage.

I found Stormy's comments to be profoundly insightful; and they came to mind as I've contemplated the contrails in June's picture. His *perception of wilderness immersion* is advanced. At the same time, one can equally appreciate the sentiment of those, like Subject 2, who do immerse themselves in the desert environment in order to remove themselves, temporarily, from the sound of human music. The experienced desert voyager can also understand that, if that is one's sentiment, how hearing someone else's music could tarnish another person's experience in the desert environment. And, at the same time, a connoisseur of wilderness travel can also understand of how someone, like Subject 1, takes pleasure in music that enhances their pleasure in an experience like this. Like "artificial" clouds, trappings of the outside world are not outside at all, but rather, as Stormy explains, there's no pure "separate"

environment. And this rests in the back of our minds, and also surely, hopefully, plays out in our sharing of these experiences with students. June's contrails demonstrate that beauty can be appreciated in a lot of things.

## APPENDIX M

DATA ANALYSIS THROUGH THE PROCESS OF PROSE  
EXAMPLE 8: APPRECIATING WEATHER



It is cool in the shadows. I have encountered over course of my career, a misconception about desert weather, i.e., that it is always hot. And yes, in July, and in August it is exceptionally hot. But today, here, in the late autumn, it is not hot. In fact, during our course we were welcomed with just about as mild weather that one could expect to ever find. These students arrived prepared for both cold and hot. In the words of Stormy, the student standing on the lookers left here in the red jacket, and the one who submitted this photo of he and his partner, Steve, “The weather was Moab cool, I guess it was like low 70s, high 60s. Evenings were somewhat much cooler, obviously. Very variant temperatures. But it was very relatively mild. For what I know about it, southern Utah can be very cold. So, we packed hats, bundled layers, puffer jackets, and also, shorts!”

The students went through various iterations of layering that day – t-shirts in the morning at the tops of rappels, in the sun; puffy down jackets, like Stormy and Steve here, pants, and hats in the shadows into which we often rappelled. It can be a bit of an annoyance to take off one’s harness and change from shorts to pants to shorts again, so we had counseled them all to wear pants just for the sake of ease and comfort, but to also bring some base layer for underneath in case it did become very cold. These two students are on the edge of the shadow and of the sun; and by this latter point in the day, and at the bottom of the third of four rappels – only 96 feet above the larger canyon floor – the sun slipped across the southern sky and beyond the canyon walls more quickly than it had earlier in the day, and higher up in the larger canyon. Most of us donned light jackets or vests at this point, even in the sunny spots.

This picture, having been asked to be taken by another student, but with Stormy’s camera, was taken of elation. “I feel appreciative,” he commented, “excited, energized, and inspired by these different opportunities to get out here... I feel, you know, connection and love

and tenderness for Sam but I'm glad that we have a new way of doing stuff outdoors together. He's very talented when it comes to skiing and a lot of other things. And so this was fun to kind of find an entry point for both of us that wasn't that wasn't like a huge skill difference." This was a common theme throughout the course – students expressed excitement at not only the fact that they were immersed in the beauty and the exhilaration, but also the fact that *learning* the skills of technical canyoneering opened up for them an entire new world of *sharing* with their loved ones. Brothers and sisters, close friends, parents, and even future kids were mentioned as potential invitees on future trips to the canyon wilderness. When words and phrases like “appreciative, excited, energized, and inspired” all come out in the description of a learning environment, and one that will be in the present or into the future plan to be shared with loved ones, instructors feel the same emotions – appreciative, excited, energized, and inspired. The desert canyon environment helps to foster those feelings.