Exploring the Essence of a Meaningful or Spiritual Connection to Nature:

A Qualitative Study Using a Phenomenological Approach and Photo-Elicitation Techniques

by

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Abstract

The intent of this study was to identify what it means to have a meaningful or spiritual connection to nature and the role of awe in such a connection. The study participants were recent graduates of Capilano University's Outdoor Recreation Management program. The study used a phenomenological approach and photo-elicitation methods. Participants provided photographs representing their connection to nature and semi-structured interviews were centred on the participants' photographs. In compliance with COVID-19 pandemic restrictions, an online platform (Zoom) was used to conduct, record, and transcribe interviews. Qualitative data were generated through interview transcripts, photographs, interviewer journaling, and follow-up emails.

Thematic analysis of the data moved the research from the individual to the collective, revealing six prominent themes: connection to self, connection to others, well-being, presence, awe, and spiritual connection. The results indicated that connection with nature facilitates awe for the natural world, including feelings of gratitude, humility, and appreciation. The experience of awe may also help establish a connection to the natural world, and the universe at large. The research suggests that connection and awe can help eliminate a colonial approach to nature; instead, one may begin to identify as a small component of an inherently complex and interconnected Land.

This research study supports that participants who have a pre-existing connection to nature likely experience awe, and although the emotion of awe can be experienced through various means, solo travel through nature facilitates a deep sense of presence. Spending time immersed in nature can facilitate feelings of connection to a universal energy. Ultimately, awe, spirituality, and connection to nature are interconnected in a dynamic relationship. This study's results have stimulated many questions for future research avenues, and have practical implications and recommendations for educational programming and applied strategies for persevering through the COVID-19 pandemic.

Preface

This research study, titled “Exploring the Essence of a Meaningful or Spiritual Connection to Nature” is an original intellectual product of the author, Bridget McClarty, and was conducted through the University of British Columbia as partial completion of a Master of Education degree.

Approval for this study was granted through the University of British Columbia’s Behavioural Research Ethics Board certificate number H20-01135 and Capilano University’s Research Ethics Board certificate number 2020-009-UBCF-MCCLARTY. Permission was also granted by the Dean of Capilano University’s Faculty of Global and Community Studies.

Bridget McClarty acted as the Researcher and Co-Investigator and was responsible for developing the research questions, participant recruitment, data collection/interviews, transcription, analysis, and thesis preparation. The project was overseen by the Principal Investigator, Dr. LeAnne Petherick, in collaboration with Dr. Hartley Banack and Dr. Claire Robson.

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Acknowledgements

The west coast is my birthplace and home, where as a child I played in the forest and in the snow and established my connection to nature. I am so grateful for the privilege to live and play on the sacred land of the Sḵwx̱wú7mesh Úxwumixw (Squamish Nation). The ocean, river, mountains and forest of the Squamish Estuary grounded me throughout this journey, and reminded me what it means to have a deep connection to nature.

I owe so much to Robi, whose support, encouragement, humour, and love lifted my spirits and helped me to maintain perspective. Our expeditions throughout this journey enabled me to return home, refreshed and inspired by our mutual love for the natural world. There is no one with whom I would rather be.

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Among the Trees

When I am among the trees,
especially the willows and the honey locust,
equally the beech, the oaks and the pines,
they give off such hints of gladness.
I would almost say that they save me, and daily.

I am so distant from the hope of myself,
in which I have goodness, and discernment,
and never hurry through the world
but walk slowly, and bow often.

Around me the trees stir in their leaves
and call out, "Stay awhile."
The light flows from their branches.

And they call again, "It's simple," they say,
"and you too have come
into the world to do this, to go easy, to be filled
with light, and to shine."

- *M. Oliver*

For Valérie

Chapter 1: Introduction

Everybody needs beauty as well as bread, places to play in and pray in,
where nature may heal and give strength to body and soul alike.
- *J. Muir*

1.1 Understanding Connection to Nature

Many outdoor education programs approach the natural world as a vehicle for personal growth (Lowan, 2009, p.48) or self-improvement, or as something to be conquered or overcome (Sabet, 2018, p.14). Other outdoor environmental programs situate humans as nature's custodians or stewards, as opposed to being inherently connected to the Land (Merchant, 2004, as cited in Lowan, 2009; Sabet, 2018). Positioning humans in roles that invite them to exploit, conquer, or manage the Land and its species is an inherently colonial perspective (Lowan, 2009; Sabet, 2018) as Indigenous cultures tend to view humans as deeply interconnected with the Land (Kimmerer, 2013; Lee-Hammond, 2017).

Currently, non-Indigenous western populations report feeling increasing disconnection from nature (Barry, 2009; Kareiva, 2008), and a growing body of evidence indicates that time spent outdoors for contemporary western children is decreasing (Larson et al., 2019). Re-establishing young people's sense of connection to nature would have long-term universal benefits, for "if people never experience nature and have negligible understanding of the services that nature provides, it is unlikely people will choose a sustainable future" (Kareiva, 2008, p.2758).

Spending time in wild spaces has been an important component of my life, and I feel a deep connection to the natural world. As an outdoor education professional, I seek opportunities to help facilitate and grow my students' awareness and awe for the natural

world. The purpose of this research is to explore what it means to be connected to nature, and how the feeling of awe relates to a meaningful or spiritual connection to the natural world.

1.2 Objective and Research Question

The research objective was to identify what it means to have a meaningful connection to nature, so that educators, guides and facilitators might better understand these types of connection and, therefore, be able to facilitate possible opportunities for such meaningful connection to occur. The central research question is the broadest question that explores the phenomenon in the study (Creswell, 2014), and this study's central research question is:

- What is the essence of a meaningful, or spiritual, connection to nature?

The following sub-question supported the research question:

- What role does awe play, in facilitating a meaningful or spiritual connection to nature?

The fundamental question behind this research project is that although educators and guides commonly state the importance of (re)connecting to nature, *connection to nature* is neither clearly defined nor understood, especially as it relates to potentially profound experiences that the participants might describe as meaningful or spiritual.

For this study, I adopted Ives et al.'s (2017) definition of *nature*, as "places, landscapes and ecosystems that are not completely dominated by people, but also include non-human organisms, species and habitats" (p.106). *Connection to nature* is an emotional

connection, when a human cares for the natural world, or when the natural world becomes "a facilitator of a deep sense of well-being and even extraordinary states of awareness and consciousness" (Brymer & Gray, 2009, p.145). This study defines *spirituality* as an awareness of, and connection to, everything outside oneself and a sense that one is connected to all things (Fredrickson & Anderson, 1999; Heintzman, 2009; Mayhew, 2004; Riley & Hendee, 2000; Schmidt & Little, 2007). *Awe* is usually a positive emotion that involves wonder and is "an emotional response to perceptually vast stimuli that defy one's accustomed frame of reference in some domain" (Piff et al., 2015, p.883).

1.3 Purpose and Methodological Considerations

The purpose of this phenomenological inquiry was to understand the experience of having a meaningful or spiritual connection to nature, and how experiencing awe might facilitate such a connection.

In selecting a methodological framework for this research, I wanted to find an intersection that aligned with my own worldview, addressed the study's research questions, and supported the study's intended purpose. I chose to use a phenomenological approach to discover the essence of what it means to have a connection to nature as *phenomenology* mandates "a qualitative approach that privileges personal experience, is descriptive, searches for common essences and is consistent with a pedagogy informed by constructivism" (Morse, 2011, p.66). Phenomenological research describes "the essence of the experiences for several individuals who have all experienced the phenomenon" (Creswell, 2014, p.14), and "allows the researcher a 'window-view' into the lived-experience of the individual, providing a rich descriptive account of various aspects of the phenomenon being studied" (Fredrickson, 1996, p.136). I chose to use Descriptive Phenomenology

because its primary goal “is to better understand a phenomenon as experienced by a participant in their lifeworld” (Jackson et al., 2018, p.3311). *Descriptive Phenomenology* captures knowledge and builds understanding about experiences, and the meanings of such experiences can be described, but need not be interpreted (Jackson et al., 2018; Sundler et al., 2019).

The study participants were recent graduates of the Outdoor Recreation program at Capilano University in North Vancouver. Participants in this study were invited to share photos and experiences that represented their “meaningful, or spiritual, connection to nature”. Neither parameters nor definitions were provided, and participants determined which photos and experiences represented their connection. Participants shared their photographs and described their lived experiences. I trusted in the process of phenomenology and invited the participants to share their experiences with me while I deliberately avoided theoretical frameworks, to reduce preconceived notions or expectations while collecting the data.

The intent of this study was to understand the essence of what it means to feel a sense of meaningful, or spiritual, connection to the natural world. Through this research, I aimed to provide data, insight and understanding to outdoor education and recreation educators, and to assist them in creating programming opportunities for nurturing a connection to nature.

An examination and review of the current literature surrounding this topic in Chapter 2 will further illustrate the context and research into experiencing awe and feeling connected to nature. Chapter 3 details the research methodologies for this study. Chapter 4 presents the results and discussion of the research findings, and Chapter 5 outlines conclusions and recommendations from this research.

Chapter 2: Literature Review

Gratitude bestows reverence, allowing us to encounter everyday epiphanies, those transcendent moments of awe that change forever how we experience life and the world.
- *J. Milton*

2.1 Introduction

Humans have always been a part of the natural world (Nisbet et al., 2009; Schultz, 2000); sociobiologist E.O. Wilson (1986) postulated, “humans are born with an inherent sense of connection to nature” (Scott et al., 2014, p.81). Humans have a biological need for connection with the natural world, which is reflected in the research documenting the psychological benefits of spending time in nature (Fredrickson & Anderson, 1999; Loeffler, 2004a; Mayer & Frantz, 2004; Russell et al., 2013). Evolutionarily, humans began living urban lives relatively recently, and thus it is unlikely that this need for connection with nature has been completely erased from our DNA (Nisbet et al., 2009). However, humans have become disconnected from nature (Ashley, 2007), for reasons including: protection and comfort (Schultz, 2002); social, environmental, and economic crises (Stringer & McAvoy, 1992); the pressures of a consumer culture based on the superficiality of materialism, status, and youth (Riley & Hendee, 2000). Indeed, wilderness allows us to reconnect with our evolutionary roots: “wilderness has long been known as a place of peace, self-discovery, and renewal, where it is possible to slow down and gain insights…in our lives” (Riley & Hendee, 2000, p.129). Feelings of awe can be elicited when one is impressed by the beauty and vastness of nature (Alexander, 2015), causing us to feel both small and yet part of a larger web of life, can allow us to feel reconnected to nature and the world in general (Cooper, 2017). The purpose of this research is to explore the role of awe, and how feelings of awe are connected to a meaningful or spiritual connection to nature.

2.2 Connection to Nature

Nature is often described as the "living and nonliving components of an ecosystem" (Russell et al., 2013, p.475), while some research includes human-modified landscapes (Russell et al., 2013), other authors only consider landscapes not dominated by humans to be *natural* (Ives et al., 2017). For the purposes of this study, *nature* will refer to the living and nonliving ecosystem components of a landscape not dominated by human modifications.

The physical aspects of the natural world immediately stimulate our senses: our survival as a species depended on our ability to absorb and correctly interpret information from our surroundings (Hendee & Brown, 1987). Interacting with the physical, concrete, sensory aspects of nature harkens back to our evolutionary past: securing food and avoiding danger are some of the processes that facilitate a basic level of connection and awareness of the natural world (Hendee & Brown, 1987). Loeffler (2004a) found the physical and mental aspects of *challenge* and *survival* are foundational for recreational wilderness experiences (p.538). Scott et al. (2014) proposed that a true connection to nature involved an immersion in the wilderness and a reliance on survival skills, and used the phrase "participation in nature (PIN)" to describe this connection. The PIN researchers sampled respondents' binary (yes/no) responses to statements related to their experiences participating in nature, including: "Navigate by the sun or the stars", "Wear clothes made of wild animal hides", "Build myself a natural shelter", etc. The researchers' analyses indicated that the PIN supported their prediction that participating physically in survival activities relates to a sense of connection to nature. Interestingly, the researchers admitted that their methodology was not able to fully convey their participants' responses and connection to nature; however, they chose to employ quantitative research to appeal to a larger number of researchers in the empirically-biased field of psychology (Scott et al., 2014).

In 2002, Schultz approached the problem of measuring connection to nature and created the Inclusion of Nature in Self (INS). The INS is reminiscent of a Venn diagram, and

uses varying images of overlapping circles labeled ‘self’ and ‘nature,’ and participants choose the diagram that most represents how closely one feels connected with nature (Schultz, 2002). The INS format and presentation is simple, easy to administer, and several studies confirmed the content validity of the INS (Martin & Czellar, 2016). However, its simplicity is also one of the major criticisms: the INS scale uses only cognition as a level of evaluating connection to nature (Martin & Czellar, 2016; Mayer & Frantz, 2004; Nisbet et al., 2009).

Biophilia refers to the love of life, or humans’ tendency to be attracted to living beings and nature (Simaika & Samways, 2010). Our desire for animal companionship and spending time in natural landscapes have been shown to increase “productivity, happiness, and longevity” (Simaika & Samways, 2010, p.904). Our biophilic connection to the natural world means that an emotional connection to place contributes to many people’s sense of well being (Russell et al., 2013), and “our biophilic tendencies drawing us to natural diversity are important for optimal emotional and psychological development. In other words, embracing our connection to nature makes our lives richer and more meaningful” (Nisbet et al., 2009, p.735), makes us happier (Nisbet et al., 2009; Russell et al., 2013), and improves our potential to develop spiritually (Fredrickson & Anderson, 1999). Spending time outdoors and increasing our relationship with the physical environment has well-documented benefits to our self-confidence (Loeffler, 2004a), mental health (Larson et al., 2019), and overall well being (Fredrickson & Anderson, 1999; Nisbet et al., 2009; Russell et al., 2013).

2.3 Awe and Connection to Nature

“Awe is central to the experience of religion, politics, nature, and art” (Keltner & Haidt, 2003, p.297), yet psychological research into the universal emotion of awe only started within the last two decades, with the publication of Keltner and Haidt’s “Approaching awe, a moral spiritual, and aesthetic emotion” in 2003 (Allen, 2018). Keltner and Haidt

(2003) posited that the complex emotion of awe could be distilled into two fundamental components: an awareness of profound vastness and a need to accommodate said vastness (Allen, 2018).

While vastness may include objects that are vast conceptually, such as opera arias, childbirth, or complex scientific theories, vastness frequently describes striking vistas, often in nature (Allen, 2018; Keltner & Haidt, 2003). The Grand Canyon, powerful ocean waves crashing on a rocky shoreline, and the view of Earth from space are typical examples of natural scenes that inspire feelings of awe (Allen, 2018). Encountering something that is utterly vast and beyond comprehension has the effect of altering an individual's perspective and making them feel comparatively small (Bai et al., 2017; Bonner & Friedman, 2011; Campos et al., 2013; Keltner & Haidt, 2003; Nusbaum & Silvia, 2014). However, feeling small and insignificant in response to awe does not necessarily create a sense of inadequacy; rather, experiencing such vastness allows one to feel connected to something greater than oneself (Alexander, 2015; Cooper, 2017). Feelings of universal connectedness and existential awareness are also components of awe that, for some individuals, can expand to become feelings of spirituality, divinity, transcendence (Alexander, 2015; Bonner & Friedman, 2011; Cooper, 2017; Nusbaum & Silvia, 2014), or the "the sensed presence of a higher power" (Keltner & Haidt, 2003).

When people have a profound experience that is vaster than their normal terms of reference, they must expand their understanding to accommodate their new perception of reality (Piaget & Inhelder, 1966/1969, as cited in Keltner & Haidt, 2003): they must integrate their experience of vastness with their current understanding of the world (Bai et al., 2017). Nusbaum and Silvia (2014) suggested that awe can shift, depending on the person's ability to accommodate the awe experience: "If people cannot accommodate the vast event, awe shifts into states such as fear and confusion; if people can, awe shifts into states such as

excitement and fascination" (p.522), suggesting that accommodation is vital for determining if a person's awe experience is perceived as positive or negative.

Beyond the vastness and accommodation, awe experiences may also elicit feelings of increased presence, awareness, and openness, sometimes involving heightened perceptions (Bonner & Friedman, 2011; Nusbaum & Silvia, 2014). When Maslow (1964, as cited in Keltner & Haidt, 2003) listed the features that he believed defined "peak experiences", he was certainly describing awe:

> [D]isorientation in space and time, ego transcendence and self-forgetfulness; a perception that the world is good, beautiful, and desirable; feeling passive, receptive, and humble; a sense that polarities and dichotomies have been transcended or resolved; and feelings of being lucky, fortunate, or graced (p.302).

Clearly, such descriptions suggest that awe-inspiring events can be profoundly moving experiences.

2.4 The Effect of Awe

Awe-inspiring experiences can inspire enduring shifts in perspective and transformative personal growth (Alexander, 2015; Ballew & Omoto, 2018; Bonner & Friedman, 2011; Cooper, 2017; Keltner & Haidt, 2003; Nusbaum & Silvia, 2014), or provide motivation for kindness (Piff et al., 2015); indeed, such events "may be one of the fastest ways to reorient people" (Alexander, 2015, p.14). Personalities and values are often unmalleable and difficult to change; however, a profound experience where one connects to something vast can inspire us to re-examine our goals, behaviour, and thinking (Cooper, 2017; Keltner & Haidt, 2003).

Not only can awe inspire transformative change, but it can also improve overall well being. Awe has been shown to reduce existential despair (Bonner & Friedman, 2011), and for those suffering from social isolation and disconnection, awe can increase "one's sense of

connection to the self, others, and the world" (Alexander, 2015, p.14), and can create a renewed sense of purpose in life and place in the world (Cooper, 2017). In *Awakening to Awe* (2009), Schneider argued that experiencing awe is vital to live the full range of emotions, for without it we will never experience the full spectrum of existence (as cited in Bonner & Friedman, 2011).

Additionally, awe helps to shift our perspective and our focus, as it helps us to feel small, reducing "the significance the individual attaches to personal concerns and goals" (Piff et al., 2015, p.884). Feeling small in response to awe helps us to feel connected to something universal, as a very small component of a much-greater whole (Bonner & Friedman, 2011). Awe can have a positive effect on the collective wellbeing, by influencing values, transforming stress into motivation for growth, and contributing to a sense of connectedness to others (Alexander, 2015; Bai et al., 2017; Cooper, 2017; Keltner & Haidt, 2003). Experiencing awe can inspire pro-social behaviour, such as volunteerism, caring, and kindness (Zhang & Keltner, 2016), which allows us to work cooperatively and collaboratively, as our attention shifts from our own interests to those of the social collective (Piff et al., 2015). The diminished sense of self not only allows us to shift our focus from ourselves to other people, but also to the natural world in general (Bonner & Friedman, 2011).

2.5 Awe in Nature

Natural beauty and sweeping landscapes often inspire awe, with the vastness allowing one to feel quite small and insignificant (Bai et al., 2017; Cooper, 2017; Keltner & Haidt, 2003). Research suggests that awe is one of the most significant emotions related to experiences in nature (Alexander, 2015; Keltner & Haidt, 2003; K. Williams & Harvey, 2001) and that "nature is a powerful elicitor of awe" (Anderson et al., 2018, p.1195). Awe facilitates the connection between experiences in nature and wellbeing, and when combined with an

outdoor experience in nature, awe not only increases life satisfaction but also “may be one active ingredient in the remedy that is time spent outdoors” (Anderson et al., 2018, p.1201).

Experiencing awe in nature has a positive effect on us: Wilson (1986) states that “the concept of biophilia [is] the idea that nature has the capacity to transform us as it draws us in” (as cited in Cooper, 2017, p.12). Additionally, awe experiences change our understanding of our place in the world, so that we can see ourselves as integrated and interrelated with the universe (Bonner & Friedman, 2011), as “a part of something larger than oneself” (Piff et al., 2015, p. 884), and as “an encompassing force around and within us” (Cooper, 2017, p.5). The research clearly indicates that awe plays a vital role in the human experience and connects to spirituality.

2.6 Spirituality in Nature

Spirituality is an abstract, complex construct that is truly difficult to define (Ashley, 2007), and some authors encourage individuals to create their own definitions of spirituality and spiritual growth (Ashley, 2007; Stringer & McAvoy, 1992). However, some believe that spirituality can be thought of as an awareness of, or connection to, everything outside of oneself: to community, to all beings, to the universe (Heintzman, 2009; Riley & Hendee, 2000; Schmidt & Little, 2007). Spirituality is frequently defined as a focus, on *other* rather than *self*, and may include feelings of oneness and interconnectedness to all things (Fredrickson & Anderson, 1999; Heintzman, 2009; Mayhew, 2004). “It is as if one must progress from a strong connection with self in nature as preparation for experiencing spirituality in nature” (Riley & Hendee, 2000, p.134). As one’s awareness, or focus, increases beyond the self to the levels of family, friends, community, and the natural environment, then spiritual growth can develop (Heintzman, 2009; Riley & Hendee, 2000; Schmidt & Little, 2007).

2.7 Awe and Spirituality

The relationship between awe and spirituality suggests that awe may be both the necessary precursor, and consequence, of spirituality (Van Cappellen et al., 2013), and emphasize their relationship with nature (Alexander, 2015). As Charles Gompertz, quoted in Schneider (2009), explained: “Awe is a natural response to being alive… birth, the night sky, sunrise and sunset, storm and wind…- these are everyday events - and each can be a source of wonder and amazement” (p.127). Individuals who experience awe in nature often feel a sense of spirituality, or a connection to a greater power (Alexander, 2015). “Awe encourages people to contemplate their place within the broader / scheme of things… [and] can be felt when people are open to experiencing nature” (Alexander, 2015, p.43).

Spiritual connection with the natural environment through contemplation and self-discovery is a practice that spans eras and cultures throughout the world (Riley & Hendee, 2000). Spiritual experiences in nature arise from a combination of emotional, cognitive, and/or physical connections or responses with the ecological surroundings (Havik et al., 2015; Schmidt & Little, 2007; Stringer & McAvoy, 1992). Responses contributing to a spiritual experience may include: an awe-inspiring striking physical landscape or feature (Keltner & Haidt, 2003); a range of emotions and cognitive responses (Havik et al., 2015; Schmidt & Little, 2007; Stringer & McAvoy, 1992); overcoming self, fatigue, weakness, or fear; struggle for control; and reflective contemplation (Riley & Hendee, 2000; Stringer & McAvoy, 1992). A combination of such responses can have outcomes such as greater sensory awareness, self-awareness, growth, and freedom (Fredrickson & Anderson, 1999; Schmidt & Little, 2007; Stringer & McAvoy, 1992), empowerment, strength, and reliance (Riley & Hendee, 2000), and/or an “overwhelming instant of emotional or cognitive connection with the ecological surroundings — sometimes perceived as a conscious or intelligent spirit — leading to heightened sensorial perceptions and ultimately to feelings of transcendence” (Havik et al., 2015, p.75); in other words, a spiritual experience.

2.8 Methodologies

In the last few decades, photo elicitation has developed as a qualitative approach. Loeffler (2004a) states photo elicitation is “a collaborative process whereby the researcher becomes a listener as the participant interprets the photograph for the researcher. This process invites research participants to take the leading role in the interview and to make full use of their expertise” (p.539). Allowing participants to select photos to contribute to the research and discuss the content during the interviews “elicits responses, emotions and memories that generate conversation connected to the participants’ understandings, beliefs, and meanings, as opposed to the researchers’” (Toll, 2016, p.31).

Loeffler (2004a) studied the meaning of outdoor adventure experiences among university students enrolled in an outdoor program. Fourteen co-ed students, between the ages of 18-21, were selected to participate in the research. They had a range of outdoor experience from a variety of outdoor disciplines (Loeffler, 2004a). Participants were invited to bring photos that participants took during their outdoor trips, to be discussed during the interview (Loeffler, 2004a). Initially, the researcher considered sending students into the field with cameras to photograph meaningful images; however, this idea was abandoned out of concern that the task would influence the participants’ experiences (Loeffler, 2004a). The participants’ interviews were transcribed and, with the photographic images, were thematically analyzed (Loeffler, 2004a).

Whereas Loeffler’s (2004a) research focused on outdoor experiences, Mayhew’s (2004) phenomenological research explored the different worldviews of students’ spirituality through submitted mini-photo albums and follow-up interviews. Student participants who self-identified as ‘spiritual’ were chosen, one to represent each of eight different worldviews, or beliefs, including atheism and agnosticism (Mayhew, 2004). Mayhew (2004) asked students to take ten photos that represented *spirituality* to them and submit the mini-album for analysis; each album submission was followed by an in-depth interview with the student,

which was an opportunity to discuss the photos. Themes that emerged through re-reading transcribed interviews were analyzed to construct a description of the essence of spirituality for each student (Mayhew, 2004).

Spirituality was a focus of Riley and Hendee's (2000) vision quest research involving a mixed-method analysis of questionnaires from 187 people who participated in vision quests over a ten-year period. A vision quest is spiritual journey, traditionally practiced among many Indigenous cultures, "involving time alone in nature in search of insight… direction and purpose" (Riley & Hendee, 2000, p.128). The participants' ten-day vision quest experience included preparing for the solo, a four-day period of fasting alone in the wilderness, and reconvening with the participants following the solo (Riley & Hendee, 2000). Riley and Hendee (2000) analyzed the vision questers' responses in the questionnaires to find trends in their motivations and perceived benefits. The most common motivations for vision questing involved the desire to participate in a spiritual journey/self-discovery, personal renewal, or to gain a fresh perspective (Riley & Hendee, 2000). The most common vision quest benefits perceived by respondents were increased connection to self (self-awareness, clarity, empowerment, etc.), and to other (nature, spirituality, connectedness) (Riley & Hendee, 2000).

Overall, vision quest participants in Riley and Hendee's (2000) study were well educated and considerably older than the undergraduate participants studied by Campbell (2010) and Williams (2012). Campbell (2010) studied university students enrolled in their second year of an outdoor education undergraduate program as they participated in a solo wilderness experience. Participants chose their level of challenge: fasting or not; duration of up to five days in length; alone or with other participants; contact with facilitator or not; static or mobile location (Campbell, 2010). Campbell used an intrinsic case study approach, analyzing participants' solo field notes, questionnaires from directly after the solo, creative reflective pieces submitted one month following the solo, and semi-structured individual

interviews eight months post-solo (2010). The facilitator was highly involved in this study, and the pre-solo activities (briefing, choosing a challenge level, expectations, goal-setting exercise) had a remarkable impact on the participants' solo experience (Campbell, 2010). During the solo, some of Campbell's (2010) participants were preoccupied by their expectations of the experience, or expressed regret and disappointment over their chosen level of challenge (Campbell, 2010).

Campbell's (2010) unstructured investigation of solo wilderness immersion provided participants with a wide range of choices, and although Williams (2012) studied a similar demographic (second year, undergraduate students studying outdoor education), his research involved clear boundaries with regards to the 2- or 3-day solo wilderness experience. Many solo wilderness experiences in the literature involve facilitator intervention at specific times surrounding the solo experience (Campbell, 2010; Kalisch et al., 2011; Riley & Hendee, 2000). Facilitators during Williams' (2012) study did not facilitate a pre-solo briefing, a mid-solo discussion, nor a post-solo review; instead, participants were asked to document their experience in diaries, and then were contacted via two emails (two weeks and six months following the solo), inquiring about their solo experience and their reflective learning. Participants' learning involved increased awareness and connection to self, social connections, and spiritual awareness (Williams, 2012). The results suggest that emergent learning is possible on solo wilderness experiences without facilitator intervention (Williams, 2012).

Riley and Hendee (2000), Campbell (2010), and Williams (2012) contacted participants following their solo experience (between 6 months to 13 years later), and participants in all three studies indicated that their solo experience had a profound effect on their connections to self, others, and the environment. Post-solo communications confirmed that some participants were able to transfer the self-awareness and personal significance from their solo to their lives at home (Williams, 2012). Campbell found in her post-solo

correspondence that almost all of the participants interviewed “felt that this experience had caused them to re-evaluate their place in the world and their relationship with the environment” (2010, p.46). Williams (2012) emphasized the importance of this finding: “it is no small achievement for an educational experience to be able to evidence its ability to transfer to other aspects of a person’s life. Indeed, pioneer educational theorists from Dewey to Rogers would suggest that the learning process cannot move forward without it” (p.146).

Kalisch et al. (2011) examined a solo wilderness experience through a mixed methods approach; their research compared participants’ perceptions of an Outward Bound (OB) solo to those of a previous study of freshmen students at a Christian college. The main differences between the two studies were that the OB study involved a wider range of ages of participants (13-18), and the OB curriculum did not focus on spiritual development (Kalisch et al., 2011). Following a 24-72 hour solo, OB instructors would ask each participant several questions based on a survey tool designed by Patton (2002); the college study had used a similar survey (Kalisch et al., 2011). Quantitative data were collected related to the students’ demographics and their perspectives of different aspects of the solo, and qualitative data were collected via the Patton survey transcripts; the transcripts were read, coded, and themes emerged (Kalisch et al., 2011). Findings for both the OB and college studies found that solitude and unstructured time were some of the most enjoyable aspects, but for some participants, these were the most difficult parts of the solo experience (Kalisch et al., 2011). The OB study results “indicate that the solo enhanced participants’ attunement to their own lives, to relationships with others, and to the natural environment” (Kalisch et al., 2011, p.13), and the themes of *connection to self* and *connection to other/nature* are similar to the findings of other wilderness solo experience research (Campbell, 2010; Riley & Hendee, 2000; Williams, 2012).

The emerging themes expressed by wilderness experience participants (Campbell, 2010; Fredrickson & Anderson, 1999; Heintzman, 2009; Kalisch et al., 2011; Riley & Hendee, 2000; Williams, 2012) clearly echo the photo elicitation studies' important emergent themes for both spiritual (Mayhew, 2004) and outdoor experiences (Loeffler, 2004a):

1) Connection with self (self-discovery, self-awareness, new perspectives),

2) Spiritual connection to nature (environment, outdoors, universe),

3) Connections with others (community, humanity).

The COVID-19 pandemic, with its lockdowns and social distancing, has increased the need for remote research collection and the use of online conferencing platforms (such as Zoom) (Reñosa et al., 2021). Gray et al. (2020) found the particular benefits of using Zoom included: participant confidentiality, cloud storage of audio and video interview files, automatic transcription, and the ability to use a variety of devices (for example: laptop, tablet, or cell phone). Two recent studies found that online interview participants appreciate the opportunity to participate without traveling to an interview location, and studies did not detect significant differences in quality between face-to-face and online interviews (Gray et al., 2020; Reñosa et al., 2021).

2.9 Implications of Research for Practice

In summary, the articles explored in this review show that there are different means of assessing our connection with the natural world. Our awareness begins with understanding ourselves, and our awareness grows to encompass our immediate family and friends, our local community, humanity, all living beings, and all of nature: these levels of connection are increasing levels of spiritual awareness. Spending time in nature increases our feelings of connection, which improves our mental and emotional well-being. Many young people experience few opportunities to experience time in nature (Chawla, 2020): when we appreciate the value of providing students with opportunities for experiencing awe

and self-reflection, “we may be able to design programs that can foster spiritual connections, connections to others, and connections to self while minimizing actual risk” (Loeffler, 2004a, p.551).

Chapter 3: Methodology

But the person is anchored within a greater, universal identity.
Salt remnants of ancient oceans flow through our veins,
ashes of expired stars rekindle our genetic chemistry.
- *T. Roszak*

3.1 Introduction

This chapter outlines the researcher's background, methodological framework, methods, ethical issues, credibility and validity that were employed within this research.

3.2 The Researcher

3.2.1 My Reluctant Journey towards Qualitative Research

I have a strong background in quantitative science research, and for over 25 years, I considered 'research' to be synonymous with 'quantitative'. My honours degree was a Bachelor of Science in Ecology and Evolutionary Biology, during which I had become fully indoctrinated by the scientific paradigm, surrounded by quantitative researchers and immersed in statistical analyses and methodologies. As a field biologist, I collected data with sharp attention to sample size and variables. After leaving my career as a field biologist, I spent over a decade teaching secondary biology, science and *the scientific method*. I was immersed in the paradigm of science, but although I came from a quantitative background, I had experiences that could not be quantified.

Over the years, much of my leisure time has revolved around wilderness journeys from a few days to a month in length. Such expeditions are very important in my life – I frame the rest of my life around them. I am fortunate to have experienced many meaningful experiences on wilderness journeys; such experiences have shaped my values, life choices,

and worldview. Traveling through wild spaces makes me feel challenged, grateful, humbled, joyful, and connected.

In 2008, I was teaching in the Yukon, and participated in a week-long field course taught by Indigenous elders. We were immersed in this course; we camped on the land, learned about traditional uses for local plants, learned traditional techniques for snaring and tanning hides, and heard elders share (some, for the first time) their residential school experiences. At the end of the week, we were also invited to participate in a sweat lodge ceremony. The experience at this camp marked a turning point in my way of viewing the world, allowing me to peek through an Indigenous lens.

Later, listening to the stories emerging from Canada's Truth and Reconciliation Commission's hearings had an important impact on my understanding of First People's lived experiences. Through my work as an educator, I was very privileged to have worked with Indigenous youth in British Columbia and the Yukon. I was honoured that they shared their some of their stories and experiences with me. As I learned more about Indigenous practices and spirituality, I learned the important, integral connection of nature to spirit: Land is the source.

In 2015, I had the opportunity to work with plant medicine under the guidance of a shaman in Peru. To say it was a profound and impactful experience would be an understatement; it completely changed the way I understand my human existence.

These experiences – my own wilderness journeys, learning from the First Peoples and Land-based traditions of other cultures – were revelatory for me. They opened my eyes, and I began to better understand what it means to have connection to Land. As I learned more about the wisdom of Indigenous teachings and I discovered the healing properties of yoga, I gained clarity and acceptance of my deep feelings of spiritual connection to the natural world. Over time, I felt the rigidity of my quantitative beliefs loosening. I began to

understand that creating real change in our perspectives and in our treatment of the Earth must begin in our hearts, not our minds.

In 2018, when I was first introduced to the idea of qualitative research, my reaction was strong and immediate. I resisted qualitative research for the following reasons:

- The sample sizes were too small.
- Statistics were not incorporated (due to the small n).
- The research often could not be generalized, thus neither theories nor hypotheses could be developed.

I was frustrated that the scientific method could not be applied; the research was inherently full of biases and neither hypotheses nor controls were incorporated. I had difficulty accepting the qualitative research was ‘real’ research; to me, it appeared to be a collection of ‘fairy tales’. I was very reluctant to accept qualitative research; my belief system was shaken, and it was a tumultuous process.

Through readings and self-reflection, I began to open up to different types of methodologies. Learning about Indigenous research methods, in addition to my limited experience with talking circles, ceremonies, sweat lodges, witnessing, restorative justice, etc., further loosened my grip on quantitative methods. I realized that:

- Certain things are important and real (e.g. emotion, spirit), and can only be understood with language and other forms of representation such as photographs.
- Emotions and experiences are truly difficult to quantify and cannot be generalized across a population.
- Quantitative methods cannot capture nuanced perspectives.

I realized that I had experiences that statistics could not explain, and I was curious to learn how to explore emotion and spirit. Ultimately, I wanted to study something that resonated

with me, and I wanted to connect my passions: experiences in nature, outdoor education, and feeling awe for this amazing and beautiful planet.

3.2.2 My Pedagogical Background

I have worked for many outdoor programs since 2006, and on wilderness trips with students, I intentionally include opportunities for guided reflection, silent gratitude, and mindfulness among my students on wilderness journeys, to allow them the space to reflect and deeply connect to place; to me, these are important components of wilderness experiences. From my own experience, when students spend quiet time alone in nature, they express an

- Increased sense of well-being
- Increased sense of place.

I hesitated to address the concept of *spirituality* in my research because of my quantitative background and my fear of being judged as 'unscientific'. However, in my personal experience, time spent immersed in nature on wilderness journeys elicits meaningful experiences. Perhaps these meaningful experiences may increase and deepen a person's sense of connection to nature, and meaningful experiences may involve some level of spiritual engagement. I decided to explore these ideas and how they relate to recent graduates at the start of their wilderness related careers.

3.3 Research Design

Initially, I had planned to conduct my research during an outdoor trip (as part of an outdoor recreation university course) that incorporates a *solo* component, where students would experience wilderness solitude for a period of time. In the spring of 2020, my

qualitative research career began during a pandemic (COVID-19) crisis, and the consequential mandatory restrictions on our activities allowed me to seek an alternative research focus that did not rely on face-to-face data collection. The alternative research methods I discovered are detailed in this chapter.

This qualitative study utilized the phenomenological research inquiry. For this research, I explored the essence of having a meaningful/spiritual connection to nature. Concepts such as spirituality and meaningful connections can be difficult to describe with words (Schmidt & Little, 2007), and the photographs taken by the participants reflected their feelings of spiritual connection more easily, and also, referring to these photographs in interviews made it easier for participants to recall and discuss these feelings. Interviews using photo-elicitation allowed the interviewer to develop rapport more easily with the participants, and inspired deeper emotional interview answers (Loeffler, 2004b; Toll, 2016).

I approached my research from a constructivist worldview, as I believe that individuals construct their own learning and knowledge (Gray, 2004), and I chose a phenomenological methodology. Data were collected through semi-structured photo elicitation interviews, and data were analyzed using inductive, emerging thematic analysis (Campbell, 2010; Loeffler, 2019).

3.3.1 Phenomenology

Unlike quantitative research, phenomenology as a methodology does not attempt to explain the world; instead, it is comfortable sitting in the exploration of the description, or essence, of one's experience (Abram, 1996). As Wattchow (2007) explains, phenomenology "seeks to reveal aspects of human experiences that are difficult to reveal because they remain hidden within the habits of everyday living" (p.11). Essentially, the text (including

words and photos) is meant to describe the world as it is, without reflection (van Manen, 1990). By the end of the phenomenological account, the reader should feel that they vicariously experienced, or can at least envision, the phenomenon described (Starks & Trinidad, 2007).

3.3.2 Photo Elicitation

Using photographs in conjunction with interviews in phenomenological research has several advantages over interviews alone. Photo elicitation techniques were incorporated to assist participants' memories of the experiences, as "photos sharpened the informants' memory and reduced the areas of misunderstanding" (Harper, 2010, p.14) and stimulated richer and more emotional statements from the participants (Harper, 2010; Schaeffer & Carlsson, 2014).

Researchers have also noted that using interviewee-selected photos provides the participant with agency, removes the interviewer as the focus (Boucher, 2017), relieves interviewee stress, and makes the interviewee more likely to take interest in participating in the study, thus making it easier to develop rapport (Schaeffer & Carlsson, 2014).

3.3.3 Study Population

All participants were recent graduates of Capilano University's Outdoor Recreation and Management (OREC) program. Initial contact was made through advertisements on the Capilano University OREC Program social media pages (Facebook, Instagram), seeking OREC alumni to participate in this study by contacting the researcher. Once interested potential participants contacted the researcher, they received an email that included an

information sheet about the study, including contact information for participants if they had any questions regarding the study.

Participants volunteered to participate in the research during the fall of 2020, and all four participants were female OREC graduates. Participants' chosen pseudonyms were (alphabetically): Alex, Em, Emma, and Jeanne. Participants were interviewed by the researcher at a distance, via an online platform for video conferencing (Zoom) during September and October 2020.

3.3.4 Study Design

Participants were asked to choose two or three photos from their wilderness journeys that represent a meaningful/spiritual connection to nature for them. Participants shared their photos electronically with the researcher, and researcher and participants examined and discussed the photographs. The interviewer (following the data collection procedures described by Loeffler (2004a)) asked, "the participants questions about their experiences including trip memories, the meaning(s) they ascribe to their experience, and the value of the photograph in explaining their experience" (p.541), using open-ended questions during semi-structured interviews.

The nature of phenomenology allowed for the opportunity to explore how physical distancing and restrictions on opportunities for wilderness journeys personally affected participants during the COVID-19 pandemic. In adherence to the UBC Ethics Board's provisos, my interview prompts did not inquire about the impact of the COVID-19 crisis on the participants' relationship with nature. However, if participants mentioned the restrictions of the COVID-19 crisis and how the crisis affected their relationship with nature, I prompted them to elaborate on their experience.

3.3.5 Ethical Considerations

Prior to the start of data collection, the University of British Columbia's Behavioural Research Ethics Board (BREB) and the Capilano University Research Ethics Board examined and approved this research project proposal, to ensure all ethical issues were addressed and acknowledged.

Additionally, all study participants provided written informed consent prior to engaging in the research process. A letter was provided to all potential participants, detailing the nature and the purpose of the study. All participants signed written consent to participate in the research, and could withdraw from the study at any time. Although this research process posed little risk to participants, there was always the possibility that the process could elicit emotional reactions, and as the interviewer, I was alert to this potential reaction during the interview process. Participants chose a research pseudonym (for when their words are quoted in the research), and participants were reminded that they could revoke their consent to participate in the research at any time.

As an educator, I hoped that the experience of participating in the research process provided participants with some benefit, perhaps directly through sharing their meaningful experiences in nature, learning more about the research process, and/or inspiring them to pursue their own future research. This research might illuminate the essence of meaningful experiences during wilderness journeys. Perhaps these findings may be considered while developing and changing outdoor and environmental education programs, in terms of: decolonizing the curriculum, considering program goals, and valuing time spent alone in nature.

3.4 Data Collection

The purpose of this study was to explore recent graduate students' meaningful/spiritual connections to nature, through stories and experiences elicited by photos and interviews from the participants' experiences in nature.

Participants who wished to participate in the study were asked if they have experienced meaningful/spiritual experiences. If so, participants were prompted: *"Choose three photographs that represent meaningful/spiritual experiences during your experiences in nature"*. The participant decided what constituted a 'meaningful/spiritual experience'. Photos were from any type of wilderness journey in which they have participated, including university course, guided, guiding work, or personal recreation, from any period during their life. Prior to the interview, participants were prompted to electronically submit the photos to the researcher. In keeping with the restrictions of the COVID-19 pandemic, all photographs supplied by the participants were submitted digitally, and all one-on-one interviews were conducted virtually, through an online platform.

A phenomenological approach was used, and qualitative data was collected during virtual one-on-one video-recorded interviews with participants, as per photo elicitation interview techniques (Mayhew, 2004; Toll, 2016). As the interviewer (following the data collection procedures described by Loeffler (2004a), I "ask[ed] the participants questions about their experiences including trip memories, the meaning(s) they ascribe to their experience, and the value of the photograph in explaining their experience" (p.541), using open-ended questions during semi-structured interviews (see Appendix A for a list of interview prompts). My first question was "Can you tell me, in as much detail as possible, about what is happening in this photograph?" I had not met some of the participants previously and realized that it was vital for me to begin by developing rapport and to give the participants time to trust me before exploring their personal experiences and closely held

values. Thus, my first question had dual purposes: to understand the context of the photo and encourage the participant to relax and start talking.

Prior to each interview, I journaled about my assumptions, preconceptions, and biases. During the interview, I made notes of any thoughts, feelings, and details I noticed. Following the interview, I answered several guiding questions, and noted any additional thoughts or reflections.

3.5 Data Analysis

Once the transcripts of the interviews were generated, I conducted a thematic analysis of the data to understand the meaningful/spiritual connections to nature on wilderness journeys (Campbell, 2010; Vagle, 2018). This process was partially based on the procedure described in Creswell (Creswell, 2014) and clearly outlined in Morse's PhD thesis (2011).

I reviewed each interview transcript several times to identify and highlight significant statements that add to an understanding of the meaningful/spiritual connections to nature, creating a list of themes and topics (Farndon & Borthwick, 2007; Loeffler, 2004a).

The list of themes and topics allowed me to develop an initial list of codes that were applied to the transcripts (Creswell, 2014). The codes included a list of words, simple phrases, and sentiments that represent single ideas that showed up multiple times in the interview transcripts (Walliman, 2011).

3.5.1 Credibility, Validity, and Reliability

Following interview transcription, I emailed each participant with a transcription of their interview as a 'validity check' "to determine if the essence of the interview has been correctly 'captured'" (Groenewald, 2004). Later in the analysis, participants confirmed their interview's emergent themes.

Transcribed interviews were analyzed through thematic analysis. Thorough reading of the transcriptions and meaning condensation allowed themes to emerge from the data (Kvale, 2011), which enabled coding development during the data analysis stage (Creswell, 2014). Triangulation involves establishing themes "based on converging several sources of data or perspectives from participants" (Creswell, 2014, p.201), ideally to reach saturation, where no additional data reveals new themes or ideas (Korstjens & Moser, 2018). Participants had multiple opportunities to expand and reflect on their experiences shared during the interviews. The use of photo elicitation (of three photographs), in-depth interviews, researcher notes and journaling, participants' emailed post-interview additions, and follow-up emails to participants were used to triangulate the data collected during this study of meaningful/spiritual experiences in nature (Farndon & Borthwick, 2007; Gray, 2004).

3.5.2 Subjectivity, Bracketing, and Reflexivity

Descriptive phenomenological research requires the researcher to engage in 'bracketing', whereby the researcher acknowledges and puts aside their previous knowledge and subjectivity, to be transparent and to approach their participants' contributions with an open mind (Neubauer et al., 2019; Starks & Trinidad, 2007; Wattchow, 2007).

Although I made every effort to reduce my bias, subjectivity, and expectations from this research, some will remain. Thus, it was important for me to be transparent with my background as an outdoor educator and guide, and my experience and interest in spirituality and wilderness experiences. By disclosing my background and acknowledging my attempt to reduce my interpretation, I was 'bracketing' – "suspending assumptions and approaching phenomenon with an open mind" (Morse, 2011, p.73). Throughout the research process, I strove for transparency, by disclosing my biases and experiences to focus on participants' perspectives and descriptions (Neubauer et al., 2019).

Reflexivity in phenomenology is important to show how a researcher acknowledges that their background and experiences may shape their interpretations (Vagle, 2018). By keeping a researcher's journal throughout this research process and consistently reflecting on my positionality, I attempted to remain aware and reflect upon my assumptions and interpretations.

Chapter 4: Results and Discussion

The first act of awe, when man was struck with the beauty or wonder of Nature, was the first spiritual experience.

- *H. Skolimowski*

The methodology described in the previous chapter provided a series of narratives from a range of perspectives. The narratives provided by the participants reveal several themes related to outdoor experiences that contribute to, or facilitate, experiencing a meaningful connection to nature. The qualitative, phenomenological approach of this research and the exploration of the results has revealed how outdoor experiences and experiencing awe might contribute to feelings of connection to nature, and the essence of a meaningful or spiritual connection to nature. Throughout this chapter, several themes will be presented and supported with participant narratives and academic literature, and will be analyzed through the lens of understanding how outdoor experiences may facilitate a meaningful, or spiritual, connection to nature.

My first interview question was open-ended: “Tell me what is going in this photo? What is happening?” As the interviewer, I realized that if I wanted to ask deep and probing questions of these participants (strangers) during the interviews, I needed to develop rapport, and to allow them to relax and share their deeply held values, beliefs, and moving experiences. Most interviews began with a superficial account of the photo’s trip details and context, but over the course of the interview, the participant’s answers became increasingly reflective, thoughtful, and deeply insightful.

4.1 Themes

Through thematic analysis of the data, six main themes emerged:

1. **Connection to self** (including personal growth, empowerment, confidence)
2. **Connection to others** (including memories, family, shared experiences, mentors)
3. **Well-being** (including playfulness, excitement, calm/peace, mental wellness, escape, rejuvenation)
4. **Presence** (connection to place, non-attachment, groundedness, deep attention)
5. **Awe** (beauty, amazement, altered understanding/perspective, wonder, vastness, humility)
6. **Spiritual connection** (connecting to an energy/greater force, understanding one's place in the universe)

It should be noted that there is overlap between these themes, with somewhat indistinct boundaries. The first three themes, while important results, are not discussed in depth in this study, as they are discussed elsewhere in the literature. Instead, I have chosen to focus my discussion around themes 4 through 6, due to their more significant connections to this study's research questions.

The photos and interviewer's journaling were included in the results and support the interview transcriptions.

I was unable to ask a direct question about the impact of the COVID-19 pandemic (and its restrictions), due to ethical concerns; however, I noticed that each participant brought up the subject of pandemic-related restrictions during the course of their interview. When the topic of COVID-19 arose, I asked subsequent questions about the impact of the pandemic on the participant's relationship to nature; the results are included in theme #3.

4.1.1 Connection to Self

Experiences in nature can create opportunities for personal growth through increased self-awareness and confidence. Spending time outdoors and increasing our relationship with the physical environment has well-documented benefits to our self-confidence (Loeffler, 2004a). Riley and Hendee (2000) found that the most common benefits reported by vision quest participants related to increased connection to self (self-awareness, clarity, empowerment, etc.). Indeed, overcoming self, fatigue, weakness, or fear; struggle for control; and reflective contemplation were found to contribute to a spiritual experience (Riley & Hendee, 2000; Stringer & McAvoy, 1992).

Alex and Jeanne found that overcoming struggles, both mental and physical, pushing comfort zones and overcoming fatigue inspired feelings of reward, satisfaction, and accomplishment. Challenging outdoor adventures allowed participants to develop and increase their self-trust, confidence and experience personal growth and development.

Challenging oneself to overcome mental obstacles and uncertainty, especially while alone in nature, elicited feelings of accomplishment, empowerment and increased confidence.

> *I'm proud of that 20 year old Jeanne that did that, took the risk, and was fearless - because I was a lot more fearless then, than I am now…I did it by myself... And I just remember, just feeling that adrenaline and you know really just, it was the solo-ness of it... there's literally nobody else around and, if you fall, you could be in trouble. (Jeanne #1)*

Solo adventuring in nature for the first time was a pivotal experience for Jeanne, Emma, and Alex and the experience allowed them to push past comfort zones, inspiring

feelings of accomplishment. Embarking on a solo adventure had the effect of increasing self-reliance, self-awareness, self-awareness and independence; additionally, the solo experience was a critical point in deepening their relationship with the natural world.

Figure 1: The Eiger, Switzerland (Jeanne #1)

So I did one solo camping trip a month for the entire year. And this photo was of my very first one…I mean, being in a tent by yourself at night is terrifying. So it was the recognition that I had accomplished that. And embracing. I think like that was a really big turning point for me was, was the change of my relationship to nature. Where it

became not a scary thing, but a very comforting thing. And I guess, seeing that time - and it wasn't in this camping trip, it probably happened eight camping trips later - that I started to really feel comfortable. But it was it the symbolism of, of having woken up, and recognize a bear had not stormed down my tent, or wasn't strung up in the tree by a cougar [laughs], but - that I could trust and be safe in nature. (Emma #1)

4.1.2 Connection to Others

All of the participants felt that sharing experiences in nature with certain people helped them to reinforce relationships and develop a sense of community. Memories of experiences in nature from participants' formative years and family strengthened their feelings of connection, and belonging, to the natural world.

My dad – he is someone who goes outside and slows down. And we don't go on hikes to get to a mountain peak, we go on hikes to stop and to look at things to, you know, see the salmonberries flowering, and to see these little minute details. So it was kind of ingrained for me from an early age that going outside is to almost, to shrink back to kind of see what we're going too fast to often notice. (Emma #1)

Experiences in nature helped to strengthen existing personal relationships and establish new ones. New relationships formed quickly in the outdoors, and participants found that sharing challenges and accomplishments in nature, common interests and goals, and unity through perseverance, added to their overall experience.

Being in OREC and having the 32 kids as your cohort, like, it felt like 32 best friends… That photo just really brings me back to that and makes me remember: "These 32 friends - amazing friends - that I made, that all love doing the same thing.

And we're there for you, no matter what because we did very hard things together and out of our comfort zones, all the time." So, I do love just the, the memory of that specific photo that is the start of all of it. (Em #1)

Figure 2: Garibaldi Provincial Park, Canada (Em #1)

New skills in the natural world were learned, and strong bonds were created, through the guidance of an outdoor mentor. Under the guidance of a mentor, the participants' skills and confidence increased. Alex described how the guidance of her mentor – an experienced through-hiker – helped her become more confident in, and connected to, the outdoors while hiking the Te Araroa Trail.

Figure 3: Te Araroa Trail, New Zealand (Alex #1)

I remember every five minutes, I'd be tempted to pull out my phone and check the GPS to make sure I'm on track because this was way different than anything I've ever walked on before or hiked on before. I mean, I'm walking through a river - that's, that's kind of weird to me. And she was like, "Stop, put your phone down, look around you. This is clearly the trail. You can see other hiking pole marks right here. We're going in the right direction. You don't need to check your phone if you keep your head up. Look, you can see there's actually a trail marker in the trail right there." So it was kind of cool. She kind of gave like the pat on the back, like, "Don't worry, you're doing a good job. You're going in the right direction. Put your phone away, you're not here to be on your phone." I'm like, "No, I'm here to walk". She's like, "So walk". (Alex #1)

4.1.3 Wellbeing

One of the most common themes of interviews for this research was the feeling of wellbeing while in the natural world; spending time in nature elicited feelings of peace, calm, joy, rejuvenation. "Wilderness has long been known as a place of peace, self-discovery, and renewal, where it is possible to slow down and gain insights on the most profound issues in our lives" (Riley & Hendee, 2000, p. 129). An emotional connection to place contributes to our sense of wellbeing (Russell et al., 2013), and may even contribute to our happiness (Nisbet et al., 2009). Spending time outdoors and increasing our relationship with the physical environment has well-documented benefits to our mental health (Larson et al., 2019) and overall well-being (Fredrickson & Anderson, 1999; Nisbet et al., 2009; Russell et al., 2013). Adventuring in nature elicited feelings of joyful playfulness, often making the participants describe their experience as feeling like a child again, enjoying the fun

challenges of clamoring around in nature, and sometimes brought about feelings of excitement and anticipation.

> *There was one section where it's like scramble up, scramble down, scramble up, scramble down, and it just was so, so fun to do again. I felt like I was climbing ladders in nature. (Alex #3)*

Participants also saw nature as a place where they could go to experience rejuvenation when they felt overwhelmed, exhausted, or low-energy. A common theme among all of the participants was that spending time in nature infused them with a deep sense of calm and peace.

> *I chose that photo [of me hugging the tree] because, to me, that just reminds me of what I need to do to get my head back, when I'm feeling really overwhelmed or when everything just feels like it's too much - just go outside. I have that picture at my desk at work, because…that is something that just reminds me, "that's where you're happy, and that's what's out there. Don't get so overwhelmed with everything on a day to day. Remember what is important, really." (Jeanne #3)*

At times, the peacefulness arose from feelings of escape. Outdoor experiences offered escape from work- and pandemic-stress, and technological distractions.

> *[When I'm listening to the waves at the beach, there's] not somebody wearing a mask or other people talking about the neighbors or that sort of thing. It's just stillness...I just am at ease with the world...it's not everything is such a bad or negative thing, which I find everybody focuses on especially recently - it's hard not to, with COVID. (Em #2)*

4.1.4 Presence

Presence is a component of awe (Bonner & Friedman, 2011; Nusbaum & Silvia, 2014), and experiencing awe in nature may elicit feelings of increased presence, awareness, and openness, sometimes involving heightened perceptions (Bonner & Friedman, 2011; Nusbaum & Silvia, 2014). In this study, the theme of presence includes three components: the feeling of being immersed in the moment, the acceptance and appreciation for the dynamic nature of life, and the feeling of deep connection to place.

Feeling connection to place was included within the theme of presence, and some participants described deep feelings of love and connection to a particular place. Participants described these feelings as “a sense of belonging”, “it’s where my roots are”, and “it’s my heart”. Jeanne expressed a deeply sensuous and tactile connection to nature, and frequently referred to feeling rejuvenation through experiencing nature through her senses.

> *I love just touching nature and, like, I know that's not always the best thing to do, but just, you know, it's the rejuvenation. The, the, you know, I love how strong, like, trees feel. I grew up on a farm and we were always just playing outside and so, like, that is, yeah, my favorite thing to do is just to go hug a tree, and like people make fun of me all the time. But you know, there's just something about feeling nature that I just love, like, yeah, redwood when it like almost crumbles in your fingers - I love that feeling. And I remember growing up playing, us constantly being in dirt and playing and, yeah, that's just where I'm happiest, I would say. (Jeanne #3)*

Emma described her complex emotions related to their connection place and to Land. Although Emma feels deeply connected to the land of her childhood, she maintains a

deep sense of remorse for her settler heritage, a reverence and appreciation for Indigenous culture, and a simultaneous envy for an ancestral connection to the Land.

Figure 4: North Shore, Canada (Jeanne #3)

A frequent theme that arose during each of the interviews was the feeling that time spent in nature allowed the participants to feel a sense of groundedness, allowing them to become centred, to step back, and regain their sense of self again.

[When I haven't been outside], I'm less centred, less grounded, feeling unstable. Acting more out of reaction than out of mindful action...And I really don't like who I am when I am disengaged that way. So nature, I guess, engages me and allows me to show up more authentically. (Emma, #2)

Some felt that they needed to bring an intention to focus on nature in order for their experience to be meaningful, whereas others felt that their presence alone was sufficient:

But, but it was realizing that in that boredom, that's where the magic happens and realizing that I didn't need that intention. I didn't need that like: "This is we're going to have my lightning strike of enlightenment" - it was more so just figuring out how to be, in in the greater context of the environment, to watch the ecosystems, to watch, you know, the clouds rolling by, and just be quiet, like that in itself was, was, the enlightenment, you know? (Emma #1)

Each of the participants valued and appreciated how nature allowed them to observe, to be fully present, and to focus their attention in the moment. Em described her walk through Sequoia National Park, looking up at the giant trees, and "being so immersed in that environment, and forgetting about everything else" (Em #3). Alex described how she was able to be present in nature, and to become aware of the small details:

A meaningful experience for me is nature's ability to make me stop. So whether that's like me learning how to stop to drink water because that mountain was really steep, or just the way the light is shining through the trees and reflecting off the leaves ... It's always going to be special. (Alex #3)

A common thread throughout the interviews was an expressed appreciation of the benefits of solitude in nature. Spiritual connection with the natural environment through contemplation and self-discovery is a practice that spans eras and cultures throughout the

world (Riley & Hendee, 2000). Periods of solitude provide the peace, tranquility, and quiet reflection time necessary to relax and be calm, allowing for spiritual contemplation (Heintzman, 2009).

Figure 5: Bowen Island, Canada (Emma #2)

Some participants found that spending solo time at the beach helped them become present and focused. Em felt that listening to the waves allowed her to forget about everything else – as though the rest of the world had simply stopped. Participants found that spending time watching the water provided peace and the calm sense of knowing: “Nope, this is exactly where I can be right now, and this is where I should be” (Jeanne #1).

Figure 6: Te Araroa Trail, New Zealand (Alex #2)

Several of the participants described the sense of peace and perspective that arose when nature allowed them to realize the emergent and dynamic nature of life. Through their time alone in nature, they were able to accept that change is constant and strive for non-attachment.

> *Like, I think that what I love about the ocean so much is that it's just constantly changing, you know. Like, you can't ever look in one spot and see the same thing. It is constantly just moving and it's so powerful, and you can never focus on anything,*

at all, because it, it moves and it changes. I think that's one of the reasons why I love it so much is like, it just, it, it reminds me that everything is constantly evolving and changing, and as scary as that is, you know, it's like never get too attached to anything. Because, that's what the water - it reminds me that it's okay, because, you know, like, look at the water: like, that's what sustains our life, right? And so, it's almost like change is what sustains our life. (Jeanne #2)

Figure 7: Mediterranean Sea (Jeanne #2)

4.1.5 Awe

The complex emotion of awe is said to have two fundamental components: an awareness of profound vastness and a need to accommodate said vastness (Allen, 2018; Keltner & Haidt, 2003). Beyond these two components, awe experiences may also elicit feelings of increased presence, awareness, and openness (Bonner & Friedman, 2011; Nusbaum & Silvia, 2014). Experiences in nature, where one is impressed by beauty, grandeur, and vastness, can elicit feelings of awe (Alexander, 2015), and has the effect of altering an individual's perspective and making them feel comparatively small (Bai et al., 2017; Bonner & Friedman, 2011; Campos et al., 2013; Keltner & Haidt, 2003; Nusbaum & Silvia, 2014).

Each participant described experiences in nature that filled them with awe. Some outdoor experiences provoked awe brought on by the power and energy of nature. Em described a sudden hailstorm in Iceland that was overwhelming, making her feel torn between going outside to "soak up all the energy" (Em #2), and remaining still, riveted and speechless. She also described the sound and the energy of waves crashing and retracting on a pebbly shore: "It's like a power trip because the waves are so big and there's so much power and you're kind of just sitting there and listening to it and, yeah, that's, yeah, it's amazing!" (Em #2)

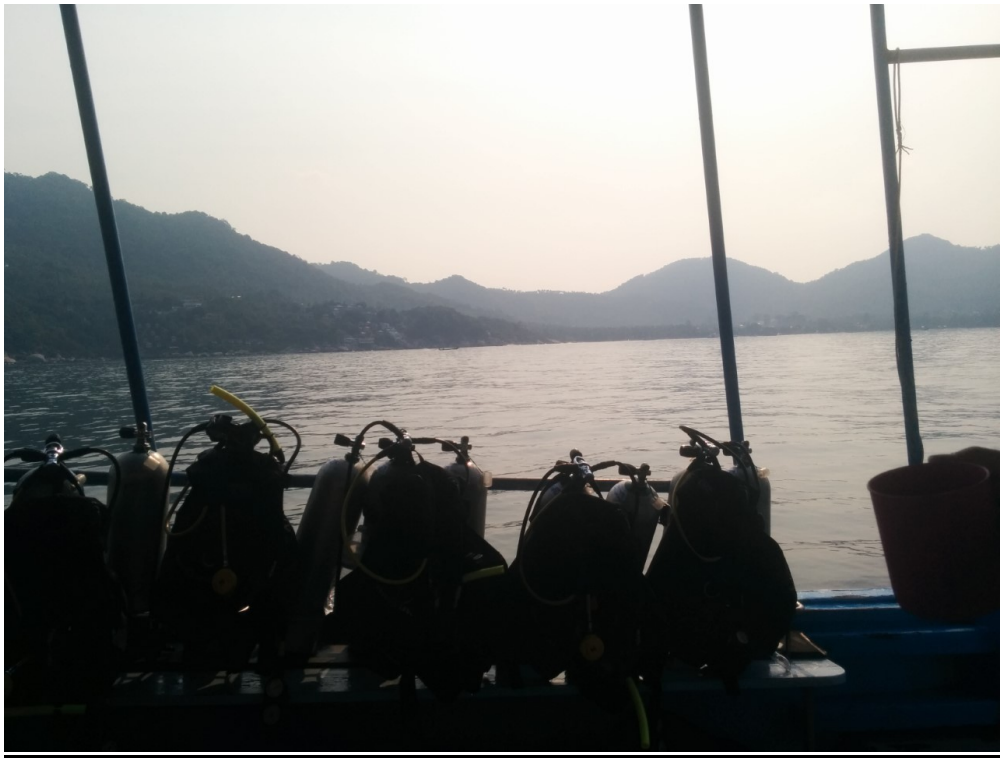
Participants described some experiences in nature that elicited feelings of wonder, curiosity, or astonishment about nature. Jeanne noted that the opportunity to gain that sense of perspective, and to experience awe in nature "almost diminishes my problems, in a way. It makes me really kind of feel human again…It reminds me, just how big the world is and how much is out there" (Jeanne #2), which provides her with a feeling of peace. Alex described walking through a forest and watching a bird, and trying to imagine its life, or imagining what the forest looked like when an ancient tree was her age.

Emma's experience diving on a tropical reef in Thailand amazed her to the point where it changed her forever. Although she had intellectually known about marine ecosystems before SCUBA diving, once she experienced the tropical reef first-hand, it fundamentally transformed her understanding of the natural world.

> *You think of, like, the great big sea, you think: "Oh, it's really cool, there's a bunch of fish swimming around down there, it's really beautiful, and the Great Barrier Reef, and yada yada yada", but then you get down there and you're like: "This fish lives in this rock its entire life and this is its HOME." It just, I don't know why that was so mind blowing…And what it represents to me is the change of perspective for, for EVERYTHING…Like, it was just such an eye opener to how much more there is to witness and to understand and to be humbled by. (Emma #3)*

Vast landscapes had a profound impact on participants, causing them to feel small, and yet connected to something much greater (Alexander, 2015; Cooper, 2017). Indeed, participants noted that the experience of feeling small provided them with an overwhelming sense of perspective. Alex described feeling humbled when she observed how glaciation sculpted grand mountain landscapes. Walking through the ancient and massive Sequoia trees made Em feel amazed, tiny, and yet connected. Emma described a personal need to feel humbled by the vastness of mountainous or marine environments, and that her underwater experience made her feel: "I am, I am, limitless, this is limitless. This is a limitless environment to witness." (Emma #3).

Figure 8: Koh Tao, Thailand (Emma #3)



One of my one of my favorite songs is by Kimya Dawson and what she says is, "I am just a speck of dust inside a giant's eye" and I always return to that. Reminds me that whatever is taking place in my life is - is nothing but a fleeting moment, you know, it's nothing but the change of tides. And, I kind of I feel called to bring that perspective back out into the world a little bit. (Emma #2)

Awe-inspiring experiences can inspire transformative personal growth and change (Alexander, 2015; Bonner & Friedman, 2011; Cooper, 2017; Keltner & Haidt, 2003; Nusbaum & Silvia, 2014). Personalities and values are often unmalleable and difficult to change; however, a profound experience where one connects to something vast can inspire us to re-examine our goals, behaviour, and thinking (Cooper, 2017; Keltner & Haidt, 2003).

4.1.6 Spiritual connection

Participants had a range of ways to describe their overall connection to nature; one person was openly reluctant to use the words such as *God* or *spiritual*, and another felt very spiritually connected to nature. For this theme, I have considered *spirituality* to include an awareness of, or connection to, everything outside of oneself: to all beings, to the universe (Heintzman, 2009; Riley & Hendee, 2000; Schmidt & Little, 2007).

As previously noted, it is important to note the relationship between awe and spirituality and their relationship with nature. Accepting the muddiness of the concepts of presence, awe, and spirituality, however, is guided by *Negative Capability* (Keats, 1817, as cited in Bate, 1963), for the uncertainty, beauty, and mystery of awe and universal connection can be neither fully discerned nor compartmentalized.

Feelings of universal connectedness and existential awareness are components of awe that, for some individuals, can expand to become feelings of spirituality (Alexander, 2015), or the “the sensed presence of a higher power” (Keltner & Haidt, 2003, p. 310). A spiritual experience may involve a sudden “connection with the ecological surroundings — sometimes perceived as a conscious or intelligent spirit — leading to heightened sensorial perceptions and ultimately to feelings of transcendence” (Havik et al., 2015, p. 75). Each of the participants in this study described experiences in nature that shifted their understanding of their place in the world, causing them to see themselves as integrated and interrelated with the universe (also described in Bonner & Friedman, 2011), creating a sense of spiritual connection.

Figure 9: Howe Sound Crest Trail, Canada (Alex #3)

Similarly, in Campbell's (2010) research into solo wilderness experiences, she found that almost all of the participants interviewed "felt that this experience had caused them to re-evaluate their place in the world and their relationship with the environment" (p.46). Participants also felt connection when they became aware of something beyond the superficial and the concrete. The experience of being in nature had a powerful effect, allowing participants to feel connected to a universal energy or something greater.

Experiences in nature allowed participants to feel spiritually connected. For Emma, each time she ventures into nature is “a spiritual experience because it is connecting to something greater than myself. It’s, humbling and reminding me of my place in the world, and the ecosystem and the universe” (Emma #1). Emma described a feeling of strong spiritual connection while experiencing nature, and recognized her feelings of reverence and the sanctity of place. She described the outdoors as her church, and natural areas as being places of worship, of sacred land.

> *For me, spirituality is innately connected spirit and what is my spirit without my outdoor environment? So if I were to remove my connection to nature, I would remove my spirit, and that's how I know I have a spiritual connection… So my spiritual connection to nature is my connection to the, to the greater collective. It's, it's that umbilical cord to, you know, from dust to dust, ashes to ashes, the energy that we arose from and the energy that we will return to - that that is spirit. (Emma #3)*

As mentioned previously, spirituality may be described as a focus outside of oneself and may include feelings of interconnectedness to all things (Fredrickson & Anderson, 1999; Heintzman, 2009; Mayhew, 2004). “It is as if one must progress from a strong connection with self in nature as preparation for experiencing spirituality in nature.” (Riley & Hendee, 2000, p.134).

Figure 10: Bowen Island, Canada (Emma #1)

In the past, Em believed that she felt good being outside simply because breathing fresh air was healthy for her, “but whereas now I…realize that it's much more powerful than just breathing fresh air and, yeah, just a higher connection and realization that it is more” (Em #3). Awe facilitates the connection between experiences in nature and wellbeing and may be the reason why outdoor experiences in nature increase life satisfaction (Anderson et al., 2018). Em recognized the presence of a universal energy, and credits her mentor for helping her make this realization:

I think [my mentor] kind of opened my eyes to the fact that nature is living, and you're just a small tiny little human in this amazing place. That you can forget about everything else and be there and feel those energies. (Em #3)

Figure 11: Iceland (Em #2)

Em felt connected to the energies of the universe during the hailstorm in Iceland, listening to the ocean waves, and while walking among the Sequoias. During a visit to Sequoia National Park, Em had a euphoric experience in nature that allowed her to feel strongly connected.

The Sequoia tree was making me feel that way, right. I didn't want to leave, and I had that warm chest and flowing with happiness and whether it be like the endorphins in my head or something, whatever the chemicals in my brain, but yeah,

it's just - I don't really know how to explain it… and just feeling so connected with something. (Em #3)

Figure 12: Sequoia National Park, USA (Em #3)

Feelings of awe and spiritual connection in nature have a positive effect on ourselves and the world around us (Bonner & Friedman, 2011). It seems that as nature draws us out

of our minds and into the world, we are transformed; it becomes difficult to dwell on our own concerns when we start to comprehend that we are a part of something much greater.

> [W]orking to better understand the nature and impact of 'self-transcendent' emotional states which bring us into the present moment, connect us to something larger than ourselves, and elicit an experience of our interconnectedness, such as wonder, reverence and awe, holds great significance for our individual and collective mental health as well as the sustainability of our planet as a whole (Alexander, 2015, p. 11).

4.2 Discussion

In this section, I will discuss my realizations from the data collection stage, revisit and revise the research questions, and explain the relationship between *awe*, *spirituality*, and *connection to nature*.

The interview themes support the concept that outdoor experiences can be a vehicle for personal growth and development, establishing and strengthening relationships with others, and improving personal wellbeing; these topics are discussed at length in the literature exploring growth mindset, outdoor personal development, Nature Deficit Disorder, and more (Kellert, 1998; Louv, 2008; O'Brien & Lomas, 2017). However, in my study of connection to nature, the themes that interested me the most are less prominent in the literature: presence, awe, and spiritual connection to nature, which is why I focused my attention on these concepts.

During the data collection stage of this research process, I was aware that I felt some initial disappointment, as themes of empowerment, pride and achievement (as opposed to awe, spirituality, and connection to nature) began to emerge; I could not perceive an

obvious connection between personal physical achievement and spiritual connection to nature.

As the study progressed and I reflected on the results, I made several realizations:

- The “overcoming challenges” narrative was usually shared at the start of the interview, prior to the development of a rapport with the participant. The participants showed great courage and vulnerability, in sharing personal, emotional experiences about deeply held beliefs with a stranger; sharing these experiences prior to establishing trust places the participant in a very vulnerable position. At the start of the interviews, it was emotionally less threatening to share experiences about concrete details and trip objectives; greater emotional depth was revealed as the interviews progressed.
- Experiencing awe in nature is an emotion and as such, it can arise via different means. One can fly in a helicopter, or hike for four days, to arrive at a summit with awe-inspiring views; the beauty of a vast landscape remains undiminished regardless of the arrival process. For example, Em experienced the hailstorm in Iceland while she was in and near her vehicle – not everyone would describe it as *wilderness* – yet she had a powerful and awe-inspiring experience, nonetheless. However, immersive experiences in nature, especially through repetitive, meditative movement, with the same repeated motion – hiking or ski touring, for example – can facilitate a flow state and can lead to absorption, described as “being fully involved and captivated by its natural features” (Ballew & Omoto, 2018, p. 27). The process of slow travel allows the participant to experience the humility of exertion, the repetition of movement, the necessity of rest (Alex #3), and the development of intimacy with the mountain, all of which can facilitate a sense of presence – a fundamental component of awe and spiritual practice.

- While interacting with other humans in nature is enjoyable, and certainly strengthens interpersonal relationships, quiet time in nature, often through solitude, provides an escape from the distractions and concerns that would otherwise prevent us from experiencing a sense of presence, awe, and connection to something greater. Relative to other positive emotions such as happiness, awe is relatively asocial (Shiota et al., 2007); the moments of realization, deep attention, presence, awe, spiritual connection and transcendence occur internally, independently, and usually alone. Occasionally, an attuned and facilitative mentor can help to nurture a sense of awe, or help one become aware of a universal energy. However, awe can be a sudden, and sometimes unexpected, experience; even if a person is not physically alone, the experience occurs internally.
- Traveling through nature often requires focus, where mistakes have consequences. As a result, the physical and mental challenges of wilderness travel can elicit extreme focus – fear, even – creating a heightened awareness or presence. These periods of focus and challenge – followed by positive emotions such as relief, gratitude, joy, and connection – provide a means to experiencing awe. As described earlier in Chapter 2, when one is able to accommodate a vast experience, awe can shift from a negative state (such as fear) to a positive state (joy, excitement, etc.). When Jeanne described her experience of climbing the Eiger alone, she was aware that an error could have serious potential consequences. She experienced the intense focus and presence of the climb, followed by relief, joy, and awe once she arrived at the summit. Maslow (1964, as cited in Keltner & Haidt, 2003) certainly described awe as he defined such *peak experiences*:

    > [D]isorientation in space and time, ego transcendence and self-forgetfulness; a perception that the world is good, beautiful, and desirable; feeling passive, receptive, and humble; a sense that polarities and dichotomies have been

transcended or resolved; and feelings of being lucky, fortunate, or graced (p. 302).

4.2.1 The Research Questions

My primary research question investigated the essence of having a meaningful connection to nature. The recruitment process for this research invited participants to be involved in a study of connection to nature, and people with a pre-existing connection to nature self-selected as study participants. For the purposes of this study, these participants were ideal for this research because they had previous experience in nature; therefore, this particular study group was not a limitation in this research. Future research could also involve participants without previous experience in nature, to investigate if such experience might increase the likelihood of having a meaningful connection to nature or an openness to experiencing awe.

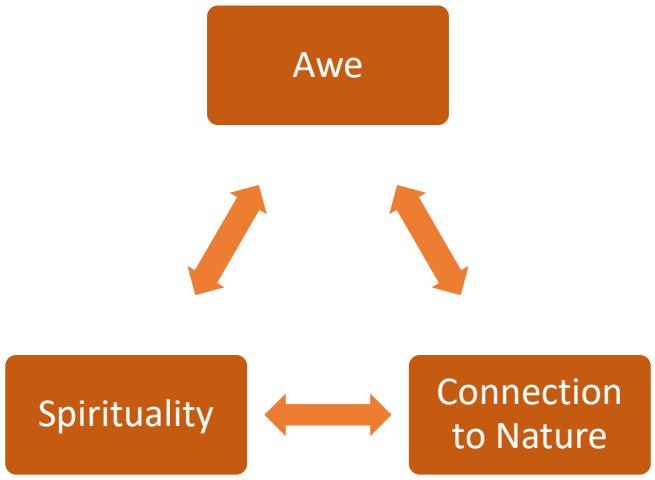
As mentioned in Chapter 1, I provided neither definitions nor parameters for the word *meaningful*, as study participants determined what was meaningful to them. My original supporting research question asked if awe facilitated a meaningful connection to nature; however, as I discovered during the research process, my participants' answers revealed that I was asking the wrong question. I could not answer the original supporting research question using this study design because these participants, with their previously established connection to nature, had already experienced awe in nature. The participants' data revealed the true supporting question: *Do people who have a meaningful connection to nature experience awe?* The answer is yes; my research supports that participants who have a pre-existing connection to nature likely experience awe.

4.2.2 The Relationship: Awe, Spirituality, Connection to Nature

Through my own emergent learning in researching awe and nature, I now understand that to experience awe is to be fully present and in the moment. Additionally, awe is ephemeral and indefinite; when we embark on a particular activity with the hope of experiencing awe there is no guarantee we will actually feel it. The feeling of awe is amazing, humbling, and fleeting, which is why it is so profound and sought after.

Through my research, a dynamic relationship between awe, spirituality, and connection to nature emerged (Figure 13), which I will now describe.

Figure 13: Relationship between awe, spirituality, and connection to nature



In Chapter 2, I mentioned how awe is the necessary precursor, and consequence, of spirituality (Van Cappellen et al., 2013). Spirituality is when our awareness is focused not on ourselves, but on the world beyond ourselves (Heintzman, 2009; Riley & Hendee, 2000;

Schmidt & Little, 2007). When our attention is focused on the world around us, we are predisposed to experience awe. When we experience awe, we feel humble and small, and become aware of our connection to something greater, inspiring what some call *spiritual connection*. In this way, awe and spirituality are intrinsically connected.

Through my research, I realized that awe is also the precursor and consequence of a meaningful connection to nature. When we gaze upon a vast and beautiful landscape and experience awe, we are present and feel connected to the world around us; when we have established our feelings of love and connection to the natural world, it inspires feelings of awe. Feelings of connection to nature inspire awe - and vice versa - creating a positive feedback loop.

Similarly, when we realize that we are a small component of a much greater network of interconnected beings (spirituality), it helps us to feel a connection to the universe in general (nature). When we feel a strong connection to, or love for, the natural world, we turn our focus from ourselves to the world around us, producing a spiritual focus; thus, feeling connected to nature is a spiritual experience.

The research documented here found that the themes of awe, spiritual connection, and connection to the natural world form a relationship and reveal a series of additional questions for future research opportunities. Additionally, this research has practical implications and recommendations for educational programming and applied strategies for persevering through this pandemic, some of which will be discussed in Chapter 5.

Chapter 5: Conclusion and Recommendations

'I've crossed these sands many times,' said one of the camel drivers one night.
'But the desert is so huge, and the horizons so distant, that they make a person feel small, and as if he should remain silent.'

- *P. Coelho*

At the heart of this research project is my quest to understand the essence of a meaningful or spiritual connection between humans and the natural environment, and the role of awe in this connection. Participants answered the research questions by sharing their photographs representing their connections to nature, and describing their meaningful experiences in nature and sharing their feelings about these experiences. Participants described experiencing deep attention, belonging, groundedness, or non-attachment. They all expressed a sense of awe when contemplating the beauty, grandeur, and vastness of the natural world, which often provided them with an altered perspective and feelings of humility. Additionally, each participant reported feeling a spiritual connection of some kind, of feeling connected to a greater energy, or sensing their place in the universe.

The results of this study show overlap among the concepts of presence, awe, and spirituality in nature. The study concludes that although the emotion of awe can be experienced through various means, slow travel through nature facilitates a deep sense of presence. Spending time immersed in nature – quietly and without distractions – can facilitate our feelings of connection to a universal energy. Ultimately, awe, spirituality and connection to nature are interconnected in a dynamic relationship, where each theme influences the others.

5.1 Strengths and Limitations

This research was meant to describe the essence of meaningful, or spiritual, connections to nature. A qualitative phenomenological approach to research involves gaining an in-depth analysis of the essence of a particular human experience; the focus is on quality over quantity and the resulting qualitative data set is nuanced and rich in depth. This study welcomed participation from non-binary and male graduates, but none responded to the invitation; instead, the study investigated the experience of female, recent graduates of the Outdoor Recreation Management Diploma program at Capilano University, who wanted to participate in research investigating the essence of a meaningful or spiritual connection to nature. Statistical generalizations cannot be made based on this study because it is not a quantitative research project; however, experiencing presence, awe, and spiritual connection to nature may also be relatable to others, even if they do not identify with the participant group.

Initially I was concerned that this study did not have enough perspectives for themes to materialize. Although I was open to seeking additional participants for the research, it became apparent that further recruitment was unnecessary as recurring themes emerged through the analysis.

Due to COVID-19 pandemic restrictions, the research methods for this study were adjusted to incorporate online, virtual interview methods. Although video conferencing was preferable to telephone or email communication, as it provided some of the nuances of non-verbal communication, the personal connection and subtle non-verbal communication of in-person communication was somewhat diminished. Additionally, the mandatory restrictions on outdoor activities and physical distancing during the pandemic meant that the meaningful experiences on wilderness journeys relied heavily on participants' accurate recall of previous wilderness experiences.

5.2 Future Research Opportunities

This study's results and research questions have stimulated many other avenues for future research.

1. My initial research proposal involved studying participants' connection to nature before, during, and after a solo wilderness experience; in the spring of 2020, I was required to adjust my research questions and methods to avoid in-person research in compliance with COVID-19 research protocols. Despite the fact that my research questions did not focus on solo experiences in nature, participants in this study identified that solitude in nature played an important role in developing their connection to nature. Future research could address the following questions: Does solitude affect the intensity, or quality, of awe? Is the quality of connection to nature influenced by solitude? How do solo wilderness experiences affect the interrelationship between awe, spirituality, and meaningful connections to nature?

2. All of the participants in this study completed two years of post-secondary education studying outdoor recreation, and self-selected to participate in a study about connection to nature; it is a reasonable assumption that the lens of the participants (regarding connection to nature) might not be universal. The question arises: Are people who choose to spend time in nature predisposed to connecting with nature? It would be interesting to expand the research to include participants who did not have formal outdoor recreation training and experience. An opportunity for future research could involve designing a study involving a control group consisting of people who do not have an existing meaningful connection to nature. The study could investigate if people in the control group experience awe, and if so, do people with a previously

established connection to nature feel awe differently (e.g. a greater sense, or a more intense feeling of awe) that those who do not?

3. It would be interesting to discover how much of awe relates to the process, or the journey, and if the intensity of the experience changes because of the process. While on an outdoor excursion, is it the journey or the outcome that elicits the experience of awe, or is one a more intense experience than the other? For example, is the experience of awe more intense when we hike, rather than helicopter, to the mountain peak? If so, how might we quantify the intensity of the feeling of awe?

4. What are the conditions necessary for one to experience awe? Are there particular activities, practices, or exercises that facilitate opportunities for participants to experience a sense of awe? Would such pedagogical conditions differ for various populations, for example, those who do not have previous experience recreating in the outdoors? If we do not experience awe in our formative years, how does that impact adult life? In creating outdoor educational programming, if we could identify and harness the pedagogical conditions necessary to nurture a connection to nature and facilitate experiencing awe, such a pedagogy could ultimately change the world.

5. Another area of research might investigate the capacity to experience awe. Is the ability to experience awe universal, or does it require a particular mindset or trait? Alternatively, does the capacity to experience awe require a spiritual orientation that is open to experiencing humility and wonder? Is it possible to increase our capacity or potential to experience awe, through mindfulness exercises, for example?

6. In this young field of awe research, most studies - including this one - involve WEIRD (Western, Educated, Industrialized, Rich, and Democratic) participants (Allen, 2018); future research should expand to study other populations. Shamanic, animistic, and Indigenous traditions have long histories of nature-based spirituality, connection to nature, and reverence for the more-than-human world. What is the essence of awe, spirituality and connection to nature for populations from other traditions? Participants with other worldviews and beliefs about nature, spirituality, and meaningful connection would provide rich future research opportunities, as we have much to learn from their perspectives and teachings, especially as we find our way forward into the New Normal, post-pandemic world.

5.3 Practical Implications of the Research

The study of awe is still relatively new, and there are many opportunities to investigate how awe, presence, and spirituality relate to our connection to nature. Awe-inspiring experiences in nature may provide a variety of benefits for individuals and society in general.

5.3.1 Educational Programs

My research has found that quiet experiences in nature are rare opportunities for us to be still and to experience gratitude and wonder. Meaningful, long-term, profound experiences allowing one to feel deeply connected to nature arise from feelings of presence, solitude, awe, smallness, and spiritual connection. Many young people experience few opportunities to spend time alone in nature (Chawla, 2020). Baird et al. (2020) found that introducing students to the practice of weaving contemplative outdoor activity or mindfulness exercises into daily life may become the gift of a personal habit, a strategy for mental

wellness, or a meaningful, or spiritual, connection to nature, and possibly pro-environmental behaviour.

Outdoor education and recreation programs would do well to prioritize opportunities experiences in nature where their students may feel present, reflective, awe-inspired, and connected; in turn, these future guides and educators might better appreciate the value of providing similar opportunities for their future students, clients, and children.

By providing students with opportunities for solitude, contemplation and self-reflection, we may be able to nurture connection to ourselves, others, and the universe (Loeffler, 2004a). Although such activities might play a small role in terms of time allotment, the potential for meaningful and long-term impact on students and society is immeasurable.

In this time of mental illness and social isolation (Pietrabissa & Simpson, 2020), perhaps the time has arrived for us to develop our collective connection to nature. Through the intentional facilitation of connecting young people to nature, I believe we may profoundly shift our societal values.

5.3.2 COVID-19 Pandemic

Communities around the world are currently experiencing a pandemic and health officials are urging us to work as a collective, to prioritize the health of others above our own desires. We are social beings, and the practice of social distancing has consequences; COVID-19, with its myriad of social and economic implications, created a secondary health concern of pandemic-related mental health challenges: stress, anxiety, fear, isolation, disconnection. For all of its challenges, perhaps there is a positive aspect to the COVID-19 lockdown: when we were isolated from our supportive loved ones, distractions, and leisure

pursuits, many of us returned to nature. During the first summer of the pandemic lockdown, natural areas experienced significant increased visitor use (Buckley & Westaway, 2020; Venter et al., 2020), and shops had difficulty meeting the demand for outdoor recreation equipment (Chin, 2020). We allowed ourselves to rediscover that reconnecting with nature positively impacts our mental health and well-being (Chaudhury & Banerjee, 2020, p.9). In this time of psychological challenges (Pietrabissa & Simpson, 2020), reconnecting with nature might be the key to maintaining our sanity.

This study describes how seeking opportunities to experience awe in nature offers profound benefits, for ourselves and for others. When we are able to focus our minds on its beauty and vastness, nature provides us with a much-needed perspective. Facilitating opportunities for people to experience awe in nature during this pandemic may provide them with both a personal mental health coping strategy and a collectivist perspective that prioritizes the health and care of others. Finding time each day to focus on the moment may help us to be present and to experience wonder and peace for a short time; we should seek opportunities to be moved by nature, to experience the transformational power of awe, to be present and in the moment, and to be compelled to help others. Perhaps feeling awe in nature is what we need now, more than ever.

5.4 Conclusion

Based on my investigation, when we nurture our connection to nature, we experience awe for the natural world, including feelings of gratitude, humility, and appreciation. The experience of awe may also help us to develop a spiritual connection to the natural world, and the universe at large. When we can develop this spiritual connection, we no longer see ourselves as conquering or managing nature from a colonial perspective;

rather, we begin to understand that we are a very small component of an inherently complex and interconnected Land.

Our species has a deep need for connection (Pietrabissa & Simpson, 2020). Nature invites us to experience awe, to feel humility, and to forge deeper connections with ourselves, our community, and the more-than-human world. Throughout the pandemic, when other opportunities for connection have been curtailed, people have sought connection through spending time in nature. Feeling a deep connection with nature inspires pro-social and pro-environmental behaviour and will have a meaningful impact on our society's direction, which is exactly what our world needs right now. For if we do not have a collective connection to nature, how can we expect our society to choose a sustainable future?

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Appendix A: Interview Prompts

Interview prompts:

1. Can you tell me, in as much detail as possible, about what is happening in this photograph?
2. What is a meaningful experience in nature?
3. What does it mean to have a connection to nature?
4. What does it mean to have a spiritual connection to nature?
5. Can you tell me about how you were feeling or experiencing, when the photo was taken?
6. Why did you choose to share this photo with me, for this research project?
7. Can you tell me about your feelings, in relation to this photograph?

Appendix B: Recruitment Post

UBC Department of Curriculum and Pedagogy

PARTICIPANTS NEEDED FOR RESEARCH ON CONNECTION TO NATURE

We are looking for volunteers to take part in a qualitative study about what it means to have a meaningful connection to nature.

You must be an OREC ALUMNUS (graduated between 2015 -2020) from CAPILANO UNIVERSITY.

As a participant in the study, you will be asked to take part in ONE interview session that will last between 60-90 minutes.

For more information about this study or to volunteer for this study,

please contact:

Bridget McClarty: [contact] (phone or text)

Or

Dr. LeAnne Petherick (Principal Investigator): [contact]

NOTE: If you choose to like or follow this research project you are likely to be identified with the study.

Appendix C: Social Media Recruitment Post

OREC GRADUATES: PARTICIPANTS NEEDED FOR RESEARCH ON CONNECTION TO NATURE

We are looking for volunteers to take part in a qualitative study about what it means to have a *meaningful connection to nature*.

You must be an OREC ALUMNUS (graduated between 2015-2020) from CAPILANO UNIVERSITY.

As a participant in the study, you will be asked to take part in ONE interview session that will last between 60-90 minutes.

For more information about this study or to volunteer for this study, please contact:

Bridget McClarty: [redacted] (phone or text) or Dr. LeAnne Petherick (Principal Investigator) [redacted]

Appendix D: Invitation to Participate in a Research Study

UBC Department of Curriculum and Pedagogy
Faculty of Education.
2125 Main Mall.
Vancouver, BC, Canada V6T 1Z4.
Tel: (604) 822-5422 Fax: (604) 822-4714.

CAPILANO UNIVERSITY

Invitation to Participate in a Research Study

Exploring the essence of a meaningful/spiritual connection to nature

Hello OREC Graduates,

Thank you for your interest in my study! My name is Bridget McClarty and I am a second year Master of Education graduate student at the University of British Columbia. The purpose of my study will be to explore meaningful/spiritual connections to nature in outdoor recreation undergraduate students and recent graduates.

This research is being done as part of my Master of Education degree capstone project, which is a semi-public document, portions of which may be presented publicly. With that being said, the identities of study participants will never be disclosed in the graduating essay or any other publications.

The goal of this letter is to invite you to share and discuss your photos depicting your meaningful experiences in nature. Your involvement in the study would be very helpful and appreciated as we explore the essence of a meaningful connection to nature, helping us to better inform outdoor pedagogy and curriculum.

I have attached an information and consent form that provides you with more information about the study and procedures that this study will follow regarding confidentiality and research ethics.

When you have had the opportunity to read the information and consent sheet, please let me know if you are interested in being involved in the study. You can contact me by email [redacted] If you are interested in participating, we will meet for one 1-1.5 hour long interview online (using the Zoom platform), at a time that is most convenient to you.

Thank you very much for your time and for considering this request. I look forward to hearing from you.

Sincerely,

Bridget McClarty
Master of Education graduate student
University of British Columbia
[redacted]

Appendix E: Consent Form for Participants

UBC Department of Curriculum and Pedagogy
Faculty of Education

CAPILANO UNIVERSITY

Consent Form for Participants

Title of Study: Exploring the essence of a meaningful/spiritual connection to nature

Principal Investigator: Dr. LeAnne Petherick, UBC, Research supervisor [contact]

Co-Investigator(s): Dr. Hartley Banack, UBC, Research advisor [contact]

Bridget McClarty, UBC, MEd Candidate / Researcher [contact]

This research is for Bridget McClarty's Master of Education capstone project, which is a semi-public document, portions of which may be publicly available.

Why should you take part in this study? Why are we doing this study?
We would like to learn more about connection to nature through outdoor experiences. We are inviting you to take part because you were recently enrolled in an outdoor program that incorporates outdoor experiences. This study hopes to explore what it means to experience a connection to nature.

What happens to you in the study if you choose to participate?
If you consent to participate in the study, you will be asked to share 2-3 photographs from your own experiences in the outdoors, and will be asked questions about the memories of that experience, your feelings about the experience, how that experience affected your connection to nature, and if you had any feelings of what you would describe as a spiritual connection to nature.

This is what will happen:
Before the interview, you will be asked to choose 2 or 3 of your photographs to share (digitally) with the interviewer, prior to the interview.

Photograph parameters:

- Photos may be from any time period in your life
- You may be the photographer of the photo, you are visible in the photo, or you were present when the photo was taken
- Photos may not include other people (other than you), unless you have obtained consent from the person to be included in the photo used for this study. (Please see the attached consent form for use of photos with the image of other people).
- Photos may be of anything that is meaningful to you and represents:
  - a meaningful experience, or connection, to nature, or
  - a spiritual experience, or connection to, nature

You will participate in an interview (online, via Zoom) that will be approximately 60-90 minutes in length, where you will be asked to share and discuss your photographs and experiences.

There is a small risk that some of the interview questions may make you uncomfortable. To mitigate this risk, you are free to decline to answer any question you do not wish to answer. If you choose not to give consent to participate you will not participate in the online interview. You may withdraw from the study at any point in time until the capstone project is written and approved.

What will happen with the results of the study?
The results of this study will be reported in a graduate capstone project and may also be published in journal articles and books and/or presented at conferences and public events. A summary of the report on the findings will be available to you after the study is over.

Is there any way being in this study could be bad for you?
We do not think there is anything in this study that could harm or have a negative impact on you. Some of the interview questions we ask may cause you to feel upset, but this is not anticipated. You may let one of the research team members know if you any concerns.

Will being in this study help you in any way?
You may benefit from this study by having the opportunity to share your experiences and feelings. Taking part in this study may not directly or immediately help you. However, in the future, others may benefit from what we learn in this study.

Measures to maintain confidentiality
Your confidentiality will be respected. As mentioned, the interviews will be confidential, so your identity will not be attached to any answers or results. If you agree to be quoted in the products of the research (see checkbox below) quotes will be attributed to a pseudonym or code (e.g., 'participant #3'). All documents will be stored on a secure server, on a password-protected and encrypted file. Participants will not be identified by name in any reports of the completed study. Images will be blurred to the extent of de-identification of individuals.

Who can you contact if you have questions about the study?
If you have any questions or concerns about what we are asking of you, please contact the study leader or one of the study staff. All contact information is listed at the top of the first page of this form.

Who can you contact if you have complaints or concerns about the study?

If you have any concerns or complaints about your rights as a research participant and/or your experiences while participating in this study, contact the:

- Research Participant Complaint Line in the UBC Office of Research Ethics at 604-822-8598 or if long distance e-mail RSIL@ors.ubc.ca or call toll free 1-877-822-8598.
- Capilano University Research Ethics Board at reb@capilanou.ca.

I have read and understand the information provided above, and hereby consent to participate in this research in accordance with the conditions described above. ☐ Yes ☐ No

I consent to being quoted (under a pseudonym) in the products of the research. ☐ Yes ☐ No

I am aware that Zoom servers are located outside of Canada, and that Zoom stores names and information regarding their use of the site outside Canada. I consent to using and being recorded on the Zoom platform, for research purposes only. ☐ Yes ☐ No

- Your signature below indicates that you have received a copy of this consent form for your own records.
- Your signature indicates that you consent to participating in this study.

_____

Participant Signature Printed Name of Participant Date

Please provide your e-mail address below, if you wish to receive information about the findings of the study.

_____ Participant's Email

If you choose to participate in this study:

- Sign and return this consent form **within one week of receiving it**, so that the research process may begin as soon as possible.
- Return this signed form using email encryption (for reference: https://www.pandasecurity.com/mediacenter/panda-security/how-to-encrypt-email/) to [email]
- If you choose to submit photo(s) with other people visible, each person in the photo must complete a signed consent form (attached). This form can be submitted (through encrypted email) when you submit the photos for the study.

Appendix F: Follow-up Email to Participants

Hello ***

Thank you for successfully submitting your consent forms - I appreciate your timeliness and interest in this project. I would like to set up a time when I can interview you; as mentioned in the information letter, you can expect the interview to last approximately 1-1.5 hour long.

As the interviews will be conducted via the online platform (Zoom), you will need to have access to the following technology:

- Reliable WiFi connection
- A laptop or desktop computer is preferable, but a smartphone could also work.
- A speaker and microphone, connected to the computer
- Download the Zoom application prior to the interview

Additionally, one week prior to the interview you will be asked to select 2-3 of your own photographs and send them to the researcher.

During the interview, you will be asked about the experience depicted in the photograph, how the photograph (or the memory related to the photograph) depicts a meaningful experience in nature or your connection to nature, and how the photograph makes you feel. The interview will be recorded on Zoom; your participation in the interview indicates your consent to being recorded during the interview.

Next steps:

1. Please indicate several times and dates when you are available, so that I might arrange a time to interview you (I will send you a Zoom invitation).
2. Select 2 or 3 photographs that you would like to discuss with me, during the interview.
3. One week (or more) before the interview, please send me an email with:
    a. the photos to share during the interview
    b. your choice of pseudonym for the study (a first/given name only is necessary).

Thank you once again for your interest in participating with this research.
I look forward to hearing from you soon.

Bridget McClarty
Master of Education graduate student
University of British Columbia

Photo guidelines:

- The photo should be digital
- Photos may be from any time period in your life
- You may be the photographer of the photo, you are visible in the photo, or you were present when the photo was taken
- The photo should represent or depict one or more of the following:
    - a meaningful experience in nature
    - a deep or meaningful connection to nature
    - a spiritual experience or connection to nature

Appendix G: Interviewer's Journal Questions

1. Have I met the participant previously?

2. When I look at these photos, what do I think I know about the participant and how do I think I know this?

3. What were my assumptions during the interview? Did these assumptions (or, my previous experiences with them) interfere with my asking of questions, behaviour or interpretation of participant's responses? If so, how?

4. Did the environment of the interview or my emotional state impact the data collection process? If so, how?