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# Inspiring Awe in the Outdoors: A Mechanistic and Functional Analysis

Joel Agate

Clemson University, [agate@clemson.edu](mailto:agate@clemson.edu)

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INSPIRING AWE IN THE OUTDOORS: A MECHANISTIC  
AND FUNCTIONAL ANALYSIS

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A Dissertation  
Presented to  
the Graduate School of  
Clemson University

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In Partial Fulfillment  
of the Requirements for the Degree  
Doctor of Philosophy  
Parks, Recreation, and Tourism Management

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by  
Joel Ryan Agate  
August 2010

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Accepted by:  
Dr. Francis McGuire, Committee Chair  
Dr. Jeffrey Hallo  
Dir. Frances Mainella  
Dr. Cynthia Pury  
Dr. Dorothy Schmalz

## ABSTRACT

The past decade has seen a movement within the field of psychology in which positive emotions have been emphasized as an important key to improved quality of life. The Broaden-and-Build Theory of Positive Emotions indicates that such emotions may provide enduring reservoirs of personal strength and may broaden thought-action repertoires, opening people's minds to new possibilities. One emotion that has begun to receive some attention among positive psychologists is awe. While little is known about this emotion, researchers and scholars have indicated that natural and outdoor environments are common settings in which people experience awe. The purpose of this study was to explore the functions and mechanisms of awe as it is experienced in outdoor settings. A collective case study was undertaken to gain an understanding of the potential consequences of awe as well as the things that elicit this emotion. Qualitative interviews and qualitative content analysis indicated that awe as experienced in the outdoors serves to motivate, inspire, and empower people to act, to provide an escape from everyday life, to encourage contemplation of life and existence, to strengthen relationships, to increase respect of nature, to facilitate learning, to create lasting positive memories, and to draw people back to the outdoors. Findings also indicated that various environmental, individual, and social factors contribute to experiences of awe in the outdoors. These factors include things one sees (e.g. natural phenomena, beauty, vastness), things one does (getting out, being in the right frame of mind), and individual characteristics (e.g. personal interests, spirituality, social orientation). Findings have important implications for recreation researchers and those who provide outdoor recreation experiences.

## DEDICATION

I dedicate this dissertation to the people who made it happen. To my brilliant wife, Sarah, your example, your encouragement, and your gentle (and sometimes not so gentle) prodding kept me working to the end. To my sweet little Eliza, your imaginative, playful spirit inspired me to play along with you, which energized me to keep on working. And to our sweet little Leo, you came along just in time to make the challenge of finishing this dissertation exciting. I love you each very much and thank you for being the most awe-inspiring part of my life.

## ACKNOWLEDGMENTS

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To my inspired and inspiring committee chair, Fran, your passion and excitement is contagious. You have asked me to do my best, and have been an unfailing advocate. I will always be grateful for this. To the other Fran, you have given me opportunities to challenge myself in my professional and academic life and the freedom to make it happen on my schedule. Your friendship and mentoring continue to be a powerful key to my success. Cindy, Jeff, and Dart, you have been teachers, mentors, and advocates. Thanks to each of you for your important and unique contributions to this work.

Finally, I know that my Heavenly Father had a hand in this work. I am forever grateful to Him and to His Son for their constant guidance. The opportunities and people that have been placed in my path could only have been provided by a loving God who knows my needs and my abilities.

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## CHAPTER ONE

### INTRODUCTION

The field of psychology has traditionally focused on understanding the various dimensions of the human psyche. Historically, psychologists have busied themselves with curing mental illness, facilitating lives of fulfillment for all people, and understanding extraordinary talent and abilities (Seligman, 1998). According to Seligman, however, the middle 20<sup>th</sup> century brought a shift in the field of psychology and the latter two missions, facilitating fulfillment and understanding talent, were almost wholly overshadowed by the first, focusing on mental illness and psychological deficits. The deficit model that dominated psychology for the latter half of the 20<sup>th</sup> century had two significant and important effects. First, this approach led to significant advancements in the understanding of mental illness, allowing for diagnosis and treatment of disorders that were previously untreatable. Second, with the latter two missions being left by the wayside, little was gained in terms of understanding human strengths and happiness.

In the midst of the decades that were dominated by the deficit model of psychology, Senator Robert F. Kennedy lamented,

The gross national product does not allow for the health of our children, the quality of their education, or the joy of their play. It does not include the beauty of our poetry or the strength of our marriages; the intelligence of our public debate or the integrity of our public officials. It measures neither our wit nor our courage; neither our wisdom nor our learning; neither our compassion nor our devotion to

our country; it measures everything, in short, except that which makes life worthwhile (Kennedy, 1968 as quoted in Gable & Haidt, 2005, p. 4).

In the above statement, Kennedy provided an implicit invitation for all who are concerned with facilitating quality of life. Thirty years later, Seligman (1998) reiterated Kennedy's message to the field of psychology as a whole, stating, "I want to remind our field that it has been sidetracked. Psychology is not just the study of weakness and damage, it is also the study of strength and virtue. Treatment is not just fixing what is broken, it is nurturing what is best within ourselves." Such nurturing of human strengths and virtues allows for an understanding of those things that make life worthwhile and will allow those working in human services to facilitate quality of life for all.

Leisure is one area of life that has significant implications for improving quality of life. The World Health Organization has indicated that the availability of leisure and recreation activities and participation in such activities are key contributors to quality of life (World Health Organization, 1997). According to one scholar, leisure may in fact more greatly influence one's quality of life than any other life domain (Kelly, 1996). Other scholars (Herzog & Rodgers, 1981; Kelly, Steinkamp & Kelly, 1987; Ragheb & Griffith, 1982) have found this connection across the lifespan. Stebbins (1992) indicated that leisure pursuits may contribute to life satisfaction and increased well-being. Stating that leisure's contributions may include feelings of accomplishment, as well as opportunities to enrich one's life, to escape one's problems, and to feel connected to the greater whole, Stebbins indicated that leisure may contribute to quality of life in many different ways. Russell (1987, 1990) found that satisfaction with one's leisure was the

single strongest predictor of life satisfaction and perceived quality of life among aging adults. People often experience positive emotional reactions during leisure. Such emotions include happiness (Hills & Argyle, 1998), peace (Kleiber, 2000), and excitement (Csikszentmihalyi, 1990). One emotion that is sometimes identified in leisure (Atlis, Leon, Sandal & Infante, 2004; Fredrickson & Anderson, 1999; Heintzman, 2006; Pohl, Borrie & Patterson, 2000) and that has begun to receive some attention among positive psychologists (Keltner & Haidt, 2003; Schneider, 2003, 2008; Sundararajan, 2009) is awe.

Awe is described as a powerful emotion that is experienced when one is confronted with stimuli that are vast and that require one to engage in the psychological process of accommodation (Keltner & Haidt, 2003). Such stimuli may be found, for example, in encounters with exceptional people or masterful works of art, during powerful spiritual experiences, or when confronted with the beauties of the natural world (Keltner & Haidt). Scholars (Curtin, 2005) have indicated that experiences of awe have emotional, psychological and physical benefits, but few empirical studies have explored this emotion. In one such study, Shiota, Keltner, and Mossman (2007) sought to offer a simple explanation of how people experience awe and to begin to differentiate it from other similar emotions. They provided a preliminary description of some possible components of awe and indicated that among their subjects a majority of awe was experienced in outdoor spaces. While awe has been recognized by scholars in the fields of psychology and leisure (as well as other fields) as a meaningful emotion that may

contribute to improved quality of life, little is known about how awe occurs or what awe does for a person.

### *Significance of the Study*

At the time that positive psychology was beginning to establish itself as a unique and meaningful discipline Seligman and Csikszentmihalyi (2000) guest edited a special edition of *American Psychologist* devoted to positive psychology. In this issue they indicated that psychology was not developing sufficient “knowledge of what makes life worth living” (p. 5) and called for a psychology that “achieves [an] understanding and effective interventions to build thriving individuals, families, and communities” (p. 13). Similarly Gable and Haidt (2005) recognized that the disease model of psychology had “learned much about depression, racism, violence, self-esteem management, irrationality, and growing up under adversity” but that modern psychology “had much less to say about character strengths, virtues, and the conditions that lead to high levels of happiness or civic engagement” (p. 103). They recognized that psychologists had learned much about how to lift someone from a critically negative state to a neutral one and indicated the need for a psychology that can take someone from a neutral state to one of joy and contentment.

Richard Louv’s (2005) book, *Last Child In the Woods: Saving our Children from Nature Deficit Disorder*, brought attention to the disconnect that today’s children (and people of all ages) are experiencing with nature. Louv described the works of many scholars who have found that exposure to nature may provide many of the developmental experiences that positive psychologists have called for. Since Louv brought the issue of

Nature-Deficit Disorder to a national stage, practitioners, scholars, and policy makers have focused significant efforts on reconnecting people with nature. Recently, Henderson and Bialeschki (2010) recognized the impact of Louv's book in sparking a national dialogue about the importance of the human-nature connection. Accordingly, they dedicated a recent volume of *Leisure Sciences* to people's relationship with nature in which they and others discussed the importance of nature based recreation in enhancing the lives of all individuals. In a further attempt to facilitate the human-nature connection, the *No Child Left Inside Act of 2009* (H.R. 2054, 2009; S. 866, 2009) was introduced as potential federal legislation to enhance opportunities for children and adolescents to become acquainted with nature. Adler and Fagley (2005) described awe as "a deep emotional, spiritual, or transcendental connection to something" (p. 82). Awe derived from experiences in the outdoors may provide a further solution to the human-nature disconnect, in that the connection facilitated by such experiences may bridge the gap that Louv and others have described.

Awe has been described as an emotion that is "in the upper reaches of pleasure" (Keltner & Haidt, 2003, p. 297). It has potential sweeping effects (Strümpfer, 2007) and some believe that it has the capacity to "change the course of a life in profound and permanent ways" (Keltner & Haidt, p. 297). A variety of specific benefits have been associated with awe. One such benefit is awe's tendency to increase people's motivation to be and do more. Düzgün (2004) indicated that awe opens people up to consideration and reflection of their moral obligations. Halstead and Halstead (2004) stated that awe has the power to affect behavior and makes people more receptive to divine law.

Similarly, Linhart (2005) found that awe provided people with purpose and direction. Strümpfer considered awe to have sweeping effects and argued that it is a source of personal strength. This was supported by Atlis et al. (2004) who found that women who engaged in a difficult wilderness excursion found awe to be a source of psychological strength. Strümpfer also indicated that emotions in general influence appraisal of situations, and that positive emotions help to create more positive appraisals. Awe is generally accepted as one such positive emotion (Keltner and Haidt).

As stated above, scholars have indicated that nature is more likely to precipitate feelings of awe than all other types of stimuli and that people who reflect on experiences of nature-based awe feel enticed to return to the outdoors (Shiota et al., 2007). Awe, then, along with all of its potential direct benefits may provide an answer for the human-nature disconnect described by Louv (2005) and contemporary leisure scholars (Henderson & Bialeschki, 2010). Scholars continue to hypothesize about the functions of awe, or what awe may ultimately do for a person, and the mechanisms of awe, or those things that elicit such feelings. Since very little empirical research has been conducted around the emotion of awe it is difficult to determine whether the current literature accurately describes this emotion as people are experiencing it, or if what is being written fails to capture the scope of this emotion.

#### *Purpose of the Study*

The purpose of the proposed study is to explore the functions and mechanisms of awe as it is experienced in outdoor settings.

### *Theoretical Framework*

Three theoretical frameworks will be used to help guide the current research. First, recreation systems theory (More & Averill, 2003) provides a framework for exploring awe as a construct. The broaden and build theory of positive emotions, (Fredrickson, 1998) speaks to potential benefits of positive emotions and will be described second. Finally, attention restoration theory describes some specific benefits of outdoor experiences that may have implications for understanding awe in the outdoors.

*Recreation systems theory.* In an attempt to provide an integrative framework for the analysis of recreation behavior, More and Averill (2003) described what they called recreation systems theory. They indicated that all recreation activities can be understood as systems of behaviors and, drawing on systems biology and general systems theory (Averill, 1992; Averill & More, 2000, Averill, Stanat & More, 1998), proposed three key characteristics of all recreation activities: functions, mechanisms, and capacities. Functions are described as the role a system plays within the larger system, mechanisms are those things that enable the function to be fulfilled, and capacities are system limits. In the context of a recreation activity, the functions are the purpose the activity serves in a person's life. The mechanisms are the things that enable the activity or that make it happen. The capacities are described as the characteristics, capabilities or skills a person must have to participate.

Much as concepts from systems biology and general systems theory guided More and Averill (2003) in clarifying the composition of various recreation activities, they can also be used to develop a deeper understanding of the composition of awe. The current

research seeks specifically to develop a deeper understanding of the experience of awe in outdoor recreation settings through describing the functions the emotion serves for the person who experiences it and the mechanisms that bring about the emotion.

*The broaden and build theory of positive emotions.* Fredrickson's (1998, 2000, 2001, 2004) broaden and build theory of positive emotions posits that positive emotions like awe serve important functions for humans. Such emotions tend to broaden a person's thought-action repertoire thereby making them more open to new ideas, new relationships and new possibilities. The broadening nature of positive emotions applies to a person's scope of attention, cognition, and action, meaning that a person experiencing a positive emotion is more likely than one experiencing a negative or neutral emotion to see the big picture, to make new connections, and to recognize new opportunities. Fredrickson (2001) cites research that supports this broadening effect, indicating that joy, for example, broadens by creating the urge to play, push the limits and be creative (Ellsworth & Smith, 1988; Frijda, 1986). Another example of the broadening effect is found in the emotion of interest, which creates the urge to explore, take in new information and experiences, and expand the self in the process (Csikszentmihalyi, 1990; Izard, 1977; Ryan & Deci, 2000; Tomkins, 1962). Fredrickson (2001) indicates that thought-action tendencies like these represent ways in which "positive emotions broaden traditional modes of thinking or acting" (p. 220).

Positive emotions also appear to build an individual's personal resources, not only for the immediate period, but the increased resources appear to be more durable than the transient state of the emotion itself (Fredrickson, 2001). According to Fredrickson,

positive emotions serve to build a person's physical resources, intellectual resources, and social resources. Positive emotions may enhance connections between people and help people to feel included as part of superordinate groups. These increased connections may indeed contribute to improved self-concept and stronger social networks. Positive emotions are likely to enhance a person's feeling that life is meaningful and to encourage discovery of positive meaning in life events, which may ultimately result in an increased quality of life. The broaden and build theory of positive emotions indicates significant potential benefits that may be derived from positive emotions. The current study may provide further evidence for the broadening and building aspects of positive emotions in general, and awe specifically.

*Attention restoration theory.* Kaplan's (1995) attention restoration theory offers a useful description of a potential function of outdoor recreation. Kaplan describes a process of attentional fatigue that happens to people in everyday life. As people engage in work and other daily activities that require focused attention their ability to concentrate becomes depleted. According to Kaplan fatigued direct attention may negatively impact one's ability to successfully navigate daily responsibilities. This fatigued attention may diminish a person's capacity to draw upon mental resources, lower one's inhibitions, cause increased personal fragility, warp one's perception, distort thought processes, and reduce one's control over action and feelings

The consequences of fatigued direct attention are many and potentially great. Modern society is such that, in order to thrive, one must be able to access the capacities that are weakened when direct attention is diminished. With attention restoration theory,

Kaplan (1995) explains a process for restoring direct attention. The key to restoring directed attention is to let it rest. One way to allow direct attention to rest is to put oneself in an environment where involuntary attention is used in its place. Kaplan offers four elements that are necessary to draw involuntary attention, thereby letting direct attention rest. He calls these, (1) being away, (2) extent, (3) compatibility, and (4) fascination. Being away means removing oneself from the situation that has required directed attention, the office for example. Extent means that one must be far removed from the situation, either conceptually or physically. Compatibility indicates that the environment to which one is removed must be compatible with the purpose of being there—for example, if one needs solitude to be away, then one must go to a place that provides solitude. Fascination is the final element of restorative environments in that it is necessary that the place to which one withdraws has the capacity to naturally draw one's attention. This keeps the person from continuing to use their directed attention, thereby allowing restorative experience to occur. Awe may indeed share some characteristics with both the extent and the fascination aspects of attention restoration theory and it is likely that experiences of awe in the outdoors provide for a high level of restoration.

Kaplan indicates that natural settings are the most appropriate environment for attention restoration. Natural settings, by definition, tend to be removed from the situations and responsibilities that require direct attention. The element of extent is present because natural environments provide a complex and varied setting that are unmistakably different from the office or the classroom. Compatibility is likely met because one does not often need to control distractions in the natural world. Since nature

offers a wide variety of stimuli and contains beauty and diversity that is unique to such a setting nature is also likely to offer the fascination element that is necessary for attention restoration. As Fredrick Law Olmstead (1968) stated, nature “employs the mind without fatigue and yet it exercises it; tranquilizes it and yet enlivens it; and thus, through the influence of the mind over the body, gives the effect of refreshing rest and reinvigorating the whole system” (p. 174).

### *Definition of Terms*

The following terms are defined in order to clarify their use in the study:

*Awe.* A powerful emotion that is experienced when one is confronted with stimuli that are vast and that cause one to engage in the psychological process of accommodation (Keltner & Haidt, 2003).

*Case.* A bounded entity, as defined by the researcher, which is representative in some way of the phenomenon being studied (Yin, 1989).

*Emotions.* The feeling aspect of consciousness consisting of three elements: identifiable elicitors, a physical manifestation, and a behavioral action tendency (Lang, 1970).

*Function.* The purpose a behavior, activity, or experience may serve within the broader context of a person’s life as a whole (More & Averill, 2003).

*Mechanism.* That which enables a behavior or event to occur; that which makes it happen (More & Averill, 2003).

*Outdoor recreation.* Outdoor activities that are enjoyable and meaningful to the person involved (Cordes & Ibrahim, 1999).

*Outdoor settings.* Any outdoor location in which one may engage in recreational activities.

*Positive emotions.* Emotions, as described above, that include a component of positive affect (Fredrickson, 2001).

*Recreation.* Activities that are enjoyable and meaningful to the person involved (Cordes & Ibrahim, 1999).

### *Format of Dissertation*

The format of this dissertation departs somewhat from the format commonly used in the social sciences. The first chapter follows the traditional format in that it serves as an introduction to the topic of study and prepares the reader for what is to come. A traditional literature review, which is typically contained in chapter two, will not be contained in this dissertation as the relevant literature is represented throughout parts of chapters three through five. Chapter two, then, will consist of a thorough description of the methods used to conduct the study. The following three chapters (three through five) contain individual journal articles suitable for submission to appropriate academic journals. The article contained in chapter three consists of a conceptual work that explores the literature dealing with awe and places awe as a construct within the context of the leisure field. Chapter four provides a description of the functions of awe explaining why awe matters and deserves the consideration of researchers. The fifth chapter contains an article that describes the mechanisms of awe, providing clarification for researchers and professionals as to how awe-inspiring events may be facilitated. The final chapter will present a brief conclusion indicating a likely direction for future awe research.

## CHAPTER TWO

### METHODS

The purpose of this study was to explore the concept of awe in outdoor recreation settings. The following research questions were explored: (1) What are the functions of experiences of awe in the outdoors, or what do such experiences do for people? and (2) What are the mechanisms that contribute to these experiences, or what makes awe happen in outdoor settings? This chapter will explain the research process and is broken into the following organizational parts: 1) design, 2) cases and participants, 3) data collection, 4) data analysis, and 5) validity and reliability or credibility and trustworthiness.

#### *Design*

A case-study approach was used to explore the concept of awe in outdoor settings. Case study research allows for in-depth exploration of a group, a program, an organization or any kind of bounded entity (Yin, 1989). In a case study the researcher gathers information by using multiple sources of data and various perspectives in order to understand the phenomenon of interest. Stake (2000) indicated that case study is an all-encompassing research strategy that allows for information to be gathered through a variety of methods and Gillham (2000) described all forms of evidence as valuable. Stating that nothing should be ignored, Gillham indicated that researchers should give heed to all sources of information. Considering the complexity of emotions in general, and the lack of clarity that exists in the current academic understanding of awe qualitative methods in general and case study research in particular were especially appropriate for

the current study. This approach allowed the researcher to explore the emotion of awe by using multiple perspectives.

Yin (2003) described exploration as one of two important aspects that may be present in case study research. The exploratory aspect allows researchers to examine questions about what the phenomenon is or what contributes to it. The second aspect of case study research is description. Descriptive case studies seek to describe what is happening in a situation or what processes are occurring. This case study was both exploratory and descriptive as it sought to explore the functions and mechanisms (More & Averill, 2003) of awe in an attempt to describe the emotion more fully than has been done to date. While Yin (1989) indicated in his early writings that a case study may be used to understand a group, he later (2003) broadened the reach of case studies when he stated that they allow researchers to develop a clear understanding of specific social phenomena (such as awe) rather than limiting their reach to groups of people. Case studies allow for the study of social phenomena by allowing for consideration of holistic and meaningful characteristics of life events (Yin, 2003).

Stake (2005) described a specific type of case study that further clarifies the distinction between Yin's earlier description of case studies in which he limited their reach to the understanding of specific groups (1989) and his latter description, allowing for case studies to be used to understand social phenomena (2003). Stake called this latter type of case study research the instrumental case study. The instrumental case study approach allows the researcher to use the case as a means of gaining insight into a particular issue or phenomenon, rather than seeking specifically to understand the

intricacies of the case itself. Stake also described a collective case study, which is an instrumental case study that considers multiple cases. As the current study sought to understand the emotion of awe as experienced in outdoor environments rather than to gain an in depth understanding of the research participants themselves, the instrumental case study approach was used. Since data were collected from multiple cases in order to answer the research questions, this study was also considered a collective case study.

### *Cases and Participants*

The population of interest for the current study was outdoor recreationists. These are people who engage in recreation experiences in outdoor settings and have, therefore, an increased likelihood of being in situations to experience awe in the outdoors.

Researchers have indicated that a majority of awe experiences are had in the outdoors (Keltner & Haidt, 2003; Marsh, 2007; Shiota et al., 2007) and this population would, therefore, be a likely source of information about the emotion. Scholars have also indicated that individuals with higher levels of cognitive and psychological resources are in a greater position to experience awe (Sundararajan, 2009). Spirituality and religiosity appear to be other characteristics of those who are likely to feel awe (Ashley, 2006; Düzgün, 2004; Elshayyal, 2007; Halstead & Halstead, 2004).

In the current study a purposeful sampling method was employed in order to gather a range of research participants who meet various aspects of the above criteria. Cresswell (2007) indicated that sampling for qualitative research should be purposeful and he provided a typology of sampling methods for qualitative research. One type of purposeful sampling that Cresswell and Miles and Huberman (1994) described is theory

based sampling. In theory based sampling research participants are selected based on an existing theoretical construct so that they can examine or elaborate on the existing construct. A theory based sample of three independent and unique cases was considered for the current study. The first case is an adult education hiking class in a local chapter of the Osher Lifelong Learning Institute, “a membership organization whose mission is to provide opportunities for ‘seasoned adults’ to further their knowledge in both academic and recreational pursuits” (Osher, n.d.). This case was selected because members of this organization have a breadth of life experience, tend to be highly educated, and continue to seek new knowledge which indicates a likelihood of sufficient cognitive and psychological resources. The second case is a camping and backpacking course taught through Clemson University’s leisure skills program which offers leisure courses to university students. This case was selected because it consists of individuals from a different age group who are also seeking education and knowledge. The third and final case consists of current and past adult leaders of a Boy Scout troop housed within a religious congregation in Upstate South Carolina. It was expected that this case would meet the criteria of spirituality and religiosity.

In collecting data for qualitative research, care must be taken to ensure that enough data are gathered. According to Seidman (2006), there are two criteria in determining enough. The first criterion is sufficiency—collecting data, that is, from a large enough group that one can safely say that research participants reflect a range of experience in order to contribute to a broad understanding. This criterion was met in the proposed study by collecting data from a number of participants within each of the three

different cases. The second criterion is saturation of information. Data saturation occurs when the researcher ceases to receive new information during additional interviews. If the same information is being reported over and over again, and no new information is being gathered, then saturation has been reached. This indicates that it is time to conclude data collection. The criteria of sufficiency and saturation were used in the proposed study and data were gathered until these criteria were reached. It was anticipated that five to eight participants would be selected from within each case. Had the initial sample of five participants per group not resulted in data saturation additional participants would have been recruited. All participants were informed of the voluntary nature of their involvement and each was given a pseudonym to assure anonymity.

#### *Data Collection*

Multiple perspectives were used to gain an in-depth understanding of the experience of awe, including what factors contribute to the experience of awe and what results such experiences bring about. Using different perspectives allows researchers to verify the repeatability of observations and interpretations (Stake, 2007). According to Yin (2003) and Kohlbacher (2006) case studies can gather evidence from many data sources. Interviews were the primary data source used in the current study. Artifacts were also used on a few occasions when research participants introduced them into the discussion. In these instances the participants had brought memories of their awe-inspiring places home with them and placed them in a prominent location in their homes. These artifacts helped to spark memories and provide further discussion points during the interviews. Other potential sources of data include documents and historical archives,

neither of which is likely to exist around the variable of interest for the current study, and observation, which researchers did not deem appropriate for the current study as awe does not appear to be a construct that can be easily observed.

In order to solicit involvement from possible research participants the researcher issued a direct invitation to all possible research participants within each case. Invitations were extended via direct email which was sent by an individual who had a direct relationship with the potential participants. In the case of the university students the email was sent by the course instructor. The OLLI participants received their invitation from the main office of their OLLI branch, and the Scoutmasters received direct invitations from the researcher. The initial invitation provided a minimal description of the study, letting people know that the researcher sought to understand people's experience of awe. As volunteers came forward, they were informed of the expectations of participation, specifically willingness to participate in an interview with the researcher and availability for follow-up interviews as needed. When people agreed to participate in the study interviews were scheduled in a location and at a time that was convenient for the participant.

In order to develop a rich and thorough understanding of people's experiences of awe, interviews were conducted with all research participants. During the semi-structured interviews the researcher sought to gain a deep understanding of the research participants' lived experiences of awe. The researcher sought through these interviews to gain an understanding of how participants interpret awe, what stimuli have contributed to experiences of awe in the outdoors and the potential short and long-term effects of such

experiences. Such interviews provided important benefits to the study, particularly in offering deep and meaningful descriptions of how people experience awe, and what such experiences mean to them. The semi-structured nature of the interviews allowed the researcher to probe for deeper and more complex descriptions of such experiences when appropriate. A list of guiding interview questions is provided in Appendix A.

During the interviews, participants were asked to complete the Multiple Affect Adjective Checklist-Revised (MAACL-R) (Zuckerman & Lubin, 1985) and a supplementary form listing other possible emotions that the literature suggests may be present during experiences of awe. These forms were used to prompt consideration of emotions that may or may not have been experienced in conjunction with awe. No quantitative analysis of either form was conducted, rather identified emotions were used to prompt further discussion during the qualitative interviews in order to provide an understanding of other emotions that may act as a catalyst for or consequence of experiencing awe.

While interview data is invaluable in providing rich descriptions of participants' experiences, it is also important to recognize the potential negative consequences of interview data. Yin (1994) suggested two particular risks that a researcher must be guard against. The first of these risks is that poorly worded questions will negatively impact the value of the information gathered. In order to minimize this risk interview questions were reviewed by the committee members, an external auditor and a panel of experts. The initial questions were based in the literature and the appropriateness of each question was determined by the overall research questions. Care was taken to structure the interviews

in a way that did not elicit a certain kind of answer from the participants. One example of this careful consideration is shown in the determination of the first question. Researchers were concerned that introducing the idea of awe at the outset of the interview may force the participant into a narrow interpretation of this emotion and limit the discussion to a narrowly defined type of experience. Rather than lead the participants immediately to a discussion of awe the researcher decided to use a slang term that may indicate some aspects of the emotion and lead them into the discussion. Participants were initially asked, then, to describe an experience that “blew [their] mind.” In response to this question over a quarter of the participants used the word awe as they described such experiences and eighty percent of participants described experiences that they later identified as awe-inspiring.

The second risk described by Yin (1994) lies in a social desirability effect, or the possibility that research participants may answer questions in a way that they expect the researcher wants. In order to address this concern, questions were asked in a neutral manner that did not guide the research participants to answer in a particular direction. Participants were also informed that, because the study was exploratory, the researchers hoped to explore all aspects of the emotion and there was not an expectation for certain types of information to be given.

Other steps can be taken to maximize the usefulness of the data collected from each data source. These steps include using multiple sources of data, creating a study database, and maintaining a chain of evidence. The researcher used multiple data sources as described above. A database was kept in which all relevant data and documents were

stored. These include all interview recordings and transcripts. In addition to the data the researcher also stored records of the data collection and analysis in the form of notes, memos, and other appropriate documentation.

### *Data Analysis*

All data, including interviews and physical artifact data, were analyzed using inductive analysis and a constant comparative method (Denzin & Lincoln, 2000; Johnson & Christensen, 2004; LeCompte & Preissle, 1993; Ryan & Bernard, 2000). Johnson and Christensen describe this method as “immersion in the details and specifics of the data to discover important patterns, themes, and interrelationships” (p. 362) and indicate that it begins by exploring then confirming findings while being guided by analytical principles. Topics that emerge from the data during this stage of analysis were coded into themes and sub-themes, which were then synthesized into an overall theme.

In order to conduct an in-depth analysis of all data a qualitative content analysis was conducted. Qualitative content analysis is “the longest established method of text analysis among the set of empirical methods of social investigation” (Tischer, Meyer, Wodak & Vetter, 2000, p. 55). As Mayring (2000) noted, qualitative content analysis is valuable not only in understanding the manifest content, but also in analyzing the latent content of the materials. Kohlbacher (2006) described the holistic approach of qualitative content analysis and indicated that it allows for an almost complete grasp of complex social phenomena. Three important procedures were carried out for the qualitative content analysis: summary, explication and structuring.

In order to provide a summary of the data the researcher must narrow down the material through paraphrasing, generalizing or reducing the text in such a way that the original content is still represented. This process will be completed for each individual research participant and the summaries will allow the researcher to consolidate the main elements of the participants' experiences into a manageable whole.

Kohlbacher (2006) described explication as explaining, clarifying and annotating the information. Certain ideas or concepts will be defined in order to attempt to clarify and explain the material. A context analysis will then be completed to understand the context of the participants' answers and to understand how their answers describe the larger phenomenon. This leads to an explicatory or explanatory process in which the researcher will attempt to understand how the various concepts are connected and what those connections indicate in terms of how things are happening. In the context of this study this means that the researcher will begin to create a possible explanation of how outdoor experiences facilitate awe and how awe influences people.

Finally, structuring will take place when the researcher attempts to filter out a structure from the material (Kohlbacher, 2006). In this process the researcher will conduct a series of processes in which the data are coded into categories. Categories will have been chosen based on the literature and theoretical assumptions and the data will be reviewed to see if it fits into these categories. This process will be repeated and changes will be made to the categories until the bulk of the relevant material fits into appropriate categories.

### *Reliability and Trustworthiness*

Among the most important concerns in designing any research study are the problems of reliability and validity. Reliability in qualitative research, also called dependability, has been described as the fit between what is recorded as data and what is actually occurring in the research setting (Bullock, 1983). Researchers have disagreed about the place of reliability in qualitative research. Taylor and Bogdan (1984) stated that replicating a qualitative study may not be possible in the real world and Marshall and Rossman (1989) emphasized that a qualitative approach does not claim to be reliable because there is no control over the variables. Others believe, however, that “a well-designed and well-documented study is automatically reliable” (Henderson, 2006, p. 190) because planning and record-keeping allow for a future researcher to follow the same research plan. Henderson argued that researchers should strive to address reliability even if perfect reliability cannot be attained. She provided guidelines that might help to increase the dependability and reliability of a qualitative study.

One important step Henderson (2006) suggests is to have a clear, well-defined plan for the research, but also allowing for flexibility. Flexibility is important because qualitative research does not take place in a laboratory and so nothing is concrete. At the same time, however, a plan helps to keep the research on track and protect against derailment. Triangulation of research methods, prolonged engagement with the area of interest and the material and, as Guba and Lincoln (1981) suggested, the use of an external auditor will serve to support reliability as well (Henderson).

The research plan that is described herein was carefully followed throughout the current study. The researcher did, however, allow for flexibility in following the plan in order to address any unforeseen challenges that occurred. Any changes to the written plan were documented as part of the audit trail. A graduate student in Clemson University's department of Parks, Recreation and Tourism Management served as the external auditor throughout the data analysis process to help ensure the reliability as well as the internal validity of the research.

#### *Validity and Transferability*

It has been said that perfect validity is impossible to achieve in qualitative research due to the nature of the approach (Kirk & Miller, 1986). As is the case in all types of research, qualitative researchers must take precautions to protect the validity of their findings.

*External validity.* External validity, which is sometimes called generalizability and often referred to as transferability in qualitative studies, deals with the ability of research findings to be applied to others beyond the research subjects themselves. Qualitative research is often criticized for having low levels of external validity. It is therefore, especially important that qualitative researchers take steps to facilitate the transferability of their findings. Henderson (2006) suggested two things that can be done to increase external validity in qualitative studies. First, she emphasized the importance of knowing the literature surrounding the concept being studied. Secondly she indicated that it is necessary that one be familiar with the research setting and related settings.

In preparation for the current study the researcher has familiarized himself with the literature surrounding the concept of awe as well as literature focusing on the various benefits of outdoor recreation. The researcher is also familiar with outdoor settings and other types of settings scholars have associated with awe. It is important to note that this knowledge and understanding helped facilitate appropriate analysis of research data and proper conclusions regarding findings and generalizability. Henderson (2006) stated that “the transferability of the theory is the most important aspect of what might be uncovered in a qualitative study” (p. 190). The researcher, therefore, made a concerted effort to ensure the external validity of the current study.

Henderson also indicated that transferability may be a matter of degree and it is important for researchers to acknowledge that degree. Acknowledging that the current study used a theoretically chosen purposeful sample of 15 participants, the extent of the transferability of this study is limited. The depth of the information that was gathered is highly valuable, however, and provides an important understanding to guide future research. It is anticipated that future research will build on the findings of this study and methods will be applied to awe in future studies which may allow for generalizability.

*Internal validity.* Internal validity, also called credibility in qualitative research, can be ensured through several important processes. One such process that the researcher must engage in is a process of personal reflexivity in which one’s personal beliefs, biases and opinions are examined in order to recognize how these may impact the collection and interpretation of data. As Henderson (2006) suggested, the researcher used guiding research questions and kept a thorough audit trail throughout the study to make sure that

the data collection and analysis are consistent with the intent of the research. The purpose of the proposed study was to gain an understanding of the functions and mechanisms of awe as it is experienced in outdoor settings. Semi-structured interview questions were written with the intent of achieving this purpose. It has been important that the researcher be vigilant about maintaining a focus on the existing research questions. By keeping an audit trail, or written documentation of the specific steps taken throughout the research process, the researcher was able to continually verify that the research process is in line with the purpose of the study.

Another important step for the current research was to ensure that interpretation of the data was consistent and logical. Wyman (1985) suggested the importance of working with the participants to make sure that the research findings reflect their experience and Guba and Lincoln (1981) indicated that “surrogate audiences” or external auditors may assist in this process. The researcher in the current study used member checks, checking with the participants during the analysis to verify that the interpretation of the research data is consistent with the intended meaning. The researcher sent findings to all participants via email and asked for their feedback about the validity of the findings. Few participants responded and those who responded indicated that the findings were representative of their own experiences. The researcher also discussed findings directly with three of the participants and received similar feedback. An external auditor was also used to verify the validity of the analysis. The auditor reviewed research notes and selected portions of the data and assisted in the development and structuring of themes and subthemes. If participants or the auditor had disagreed with research findings the

researcher was prepared to gather more information from the participants and also to revisit the original data to see if and how biases may have tainted the interpretation of the data.

## CHAPTER THREE

### AWESOME RECREATION: MAKING THE CASE FOR THE ROLE OF AWE IN RECREATION STUDIES

## ABSTRACT

One way that recreation contributes to improved quality of life is by facilitating positive emotions. Awe is an emotion that recreation and leisure scholars have identified during outdoor recreation experiences. Positive psychologists have associated awe with various important benefits, yet a commonly accepted definition of this emotion is yet to be developed. This concept paper offers a review of the literature addressing awe and argues that awe plays a potentially important role in the experience of outdoor recreation. Recommendations are given for future research to further explore awe in the outdoors.

Recreation is an important aspect of most people's lives. In fact, scholars have indicated that a full third of the average person's life consists of discretionary time (Chubb & Chubb, 1981; O'Sullivan, 2006). Many people seek opportunities to fill this discretionary time with activities that they find meaningful. Recreation and leisure activities often provide such meaning and provide other significant benefits that contribute to an improved quality of life.

One way that recreation enhances quality of life is through facilitating positive emotions, which have the capacity to facilitate feelings that life is good and worthwhile (Fredrickson, 1998). Positive psychologists believe that facilitating and emphasizing positive emotions while focusing on human strengths and virtues may go so far as having "the direct effect of preventing many major psychological disorders" (Seligman & Csikszentmihalyi, 2000, p. 8). Given the physiological effects of psychological well-being, positive emotions have the capacity to facilitate improved physical health.

Awe is one such emotion that positive psychologists have explored. Recreation researchers have identified experiences of awe in various recreation activities and among various populations (e.g. Fredrickson & Anderson, 1999; Heintzman, 2006; Pohl, Borrie, & Patterson, 2000), but have failed to elaborate on the meaning of this emotion or its place in the experience of recreation. The purpose of this paper is to introduce readers to the concept of awe and to position awe in the context of recreation research.

### *Recreation Benefits*

During the past few decades researchers have sought to uncover and understand the benefits resulting from participation in recreation activities (e.g. Driver, 2009; Driver,

Brown and Peterson, 1991). Driver (2002) emphasized the contributions of recreation services to the “total welfare of a society” (p. 84) and suggested that society has underestimated the benefits of recreation. In order to provide a better understanding of the positive outcomes of recreation, researchers have classified such outcomes into four separate categories: personal (or individual), social (or community), economic, and environmental benefits (Driver et al.). According to Driver (1997) benefits in each of these areas may be experienced in any of three ways: the maintenance of a desired condition, the facilitation of an improved condition, or the realization of a satisfying psychological experience. Although the benefits movement has been criticized for ignoring the costs of recreation participation, and for contributing to inequitable provision of recreation opportunities (More, 2002), the benefits of recreation appear to contribute significantly to quality of life.

*Recreation benefits and quality of life.* The recreation benefits research indicates that recreation has the capacity to contribute to quality of life. The connection between recreation and quality of life has been identified not only by recreation scholars but by researchers from other fields as well. According to the World Health Organization, opportunities for leisure and recreation activities and participation in such activities are significant contributors to quality of life (World Health Organization, 1997). Kelly (1996) indicated that recreation may influence quality of life more than any other life domain. Russell found that leisure satisfaction was the single strongest predictor of life satisfaction (1987) and perceived quality of life (1990) among aging adults. Stebbins (1992) indicated that leisure pursuits may contribute to life satisfaction and increased

well-being. Leisure, according to Stebbins, may contribute to quality of life in many different ways, including feelings of accomplishment, as well as opportunities to enrich ones' life, to escape ones' problems, and to feel connected to the greater whole. Many other researchers have identified recreation's contribution to quality of life across the lifespan (Herzog & Rodgers, 1981; Kelly, Steinkamp & Kelly, 1987; Ragheb & Griffith, 1982) and across cultures (Kao, Lai, Lin, Lee, & Wen, 2005; Kousha & Mohseni, 1997; Lloyd & Auld, 2002; Michalos, 2005; Michalos & Zumbo, 2003; Ritsner, Kurs, Gibel, Ratner, & Endicott, 2005; Wendel-Vos, Schuit, Tjihuis, & Kromhaut, 2004).

One additional explanation of recreation's apparent contribution to quality of life is that people experience positive emotions during recreation activities which, in turn, facilitate feelings that life is good and worthwhile. Another discipline that has put significant effort into understanding positive emotions and facilitating quality of life is the field of psychology.

### *Psychology and Quality of Life*

The field of psychology has traditionally focused on understanding the various dimensions of the human psyche. Historically, psychologists have concerned themselves with three important tasks: (1) curing mental illness, (2) facilitating lives of fulfillment for all people, and (3) understanding extraordinary talent and abilities (Seligman, 1998). According to Seligman, the middle 20<sup>th</sup> century brought a shift in the field of psychology and the latter two missions, facilitating fulfillment and understanding talent, were almost wholly overshadowed by the first, focusing on mental illness and psychological deficits. The deficit model that dominated psychology for the latter half of the 20<sup>th</sup> century had

two significant and important effects. First, this approach led to significant advancements in the understanding of mental illness, allowing for diagnosis and treatment of disorders that were previously untreatable. Second, with the latter two missions being left by the wayside, little was gained in terms of understanding human strengths and happiness, and therefore, quality of life.

In the midst of the decades that were dominated by the deficit model of psychology, Senator Robert F. Kennedy lamented:

The gross national product does not allow for the health of our children, the quality of their education, or the joy of their play. It does not include the beauty of our poetry or the strength of our marriages; the intelligence of our public debate or the integrity of our public officials. It measures neither our wit nor our courage; neither our wisdom nor our learning; neither our compassion nor our devotion to our country; it measures everything, in short, except that which makes life worthwhile (Kennedy, 1968 as quoted in Gable & Haidt, 2005, p. 4).

In the above statement, Kennedy provided an implicit invitation for all who are concerned with facilitating quality of life. Thirty years later, Seligman (1998) reiterated Kennedy's message to the field of psychology as a whole, stating, "I want to remind our field that it has been sidetracked. Psychology is not just the study of weakness and damage, it is also the study of strength and virtue. Treatment is not just fixing what is broken, it is nurturing what is best within ourselves" (p. 2). Such nurturing of human strengths and virtues allows for an understanding of those things that make life

worthwhile and will allow those working in human services to facilitate quality of life for all.

*Positive psychology.* Shortly after making the above statement, Seligman and Csikszentmihalyi (2000) encouraged research in an area that they called positive psychology. At the time that positive psychology was beginning to establish itself as a unique and meaningful discipline Seligman and Csikszentmihalyi guest edited a special edition of *American Psychologist* devoted to positive psychology. In this issue they indicated that psychology was not developing sufficient “knowledge of what makes life worth living” (p. 5) and called for a psychology that “achieves [an] understanding and effective interventions to build thriving individuals, families, and communities” (p. 13). Similarly Gable and Haidt (2005) recognized that the disease model of psychology had “learned much about depression, racism, violence, self-esteem management, irrationality, and growing up under adversity” but that modern psychology “had much less to say about character strengths, virtues, and the conditions that lead to high levels of happiness or civic engagement” (p. 103). They recognized that psychologists had learned much about how to lift someone from a critical state to a neutral one and indicated the need for a psychology that can take someone from a neutral state to one of joyfulness and contentment. The role of positive psychology, according to Seligman and Csikszentmihalyi, is to gain an understanding of ways to improve quality of life for all people, not just the psychologically troubled. Seligman and Csikszentmihalyi (2000) stated that positive psychology is, in part, “about valued subjective experience,” (p. 5) including well-being and positive emotions.

*The broaden and build theory of positive emotions.* A theory from the area of positive psychology that deals with positive emotions is Fredrickson's (1998) broaden and build theory of positive emotions. This theory posits that positive emotions serve important functions for humans. Such emotions tend to broaden a person's thought-action repertoire thereby making them more open to new ideas, new relationships and new possibilities. The broadening nature of positive emotions applies to a person's scope of attention, cognition, and action, meaning that a person experiencing a positive emotion is more likely to see the big picture, to make new connections, and to recognize new opportunities than is someone experiencing a negative or neutral emotion. Fredrickson (2001) cited research that supports this broadening effect, indicating that joy, for example, broadens by creating the urge to play, push the limits and be creative (Ellsworth & Smith, 1988; Frijda, 1986). Another example of the broadening effect is found in the emotion of interest, which creates the urge to explore, take in new information and experiences, and expand the self in the process (Csikszentmihalyi, 1990; Izard, 1977; Ryan & Deci, 2000; Tomkins, 1962). Fredrickson (2001) indicated that thought-action tendencies like these represent ways in which "positive emotions broaden traditional modes of thinking or acting" (p. 220).

Positive emotions also appear to build an individual's personal resources; not only for the immediate period, but the increased resources appear to be more durable than the transient state of the emotion itself (Fredrickson, 2001). According to Fredrickson, positive emotions serve to build a person's physical resources, intellectual resources, and social resources. Positive emotions may enhance connections between people and help

people to feel included as part of superordinate groups. These increased connections may indeed contribute to improved self-concept and stronger social networks. Positive emotions are likely to enhance a person's feeling that life is meaningful and to encourage discovery of positive meaning in life events, which may ultimately result in an increased quality of life. The broaden and build theory of positive emotions indicates significant potential benefits that may be derived from positive emotions.

#### *Positive Emotions, Positive Psychology and Recreation*

Recreation scholars have recognized positive psychological states including positive emotions as playing an important role in facilitating a better life condition for recreation participants. Positive psychologists have made significant contributions to the understanding of positive human emotions and the role they play in improving quality of life. One emotion that has received some attention from positive psychologists (Halstead & Halstead, 2004; Keltner & Haidt, 2003; Sundararajan, 2009) and that has been recognized among recreation participants (e.g. Fredrickson and Anderson, 1999; Heintzman, 2006; Pohl et al., 2000) is awe.

#### *Conceptualization of Awe*

While scholars have not agreed upon a single, consistent definition of awe, they do agree that awe is important and that it has significant and powerful implications for human well-being. In recent years scholars have described awe as a mood (Staehler, 2007), an emotion (Halstead & Halstead, 2004; Keltner & Haidt, 2003; Sundararajan, 2009) and a cognition (Heschel, as cited in Ivanhoe, 1997). Awe is typically described as a possible human response (be it mood, emotion, cognition, or something else) when one

is confronted with great beauty and grandeur (Adler & Fagley, 2005) or when one encounters something that is vast and unable to fit within existing mental schemas (Keltner & Haidt, 2003). As the majority of scholars who research awe refer to it as an emotion (e.g. Halstead & Halstead, 2004; Keltner & Haidt; Shiota, Keltner & John, 2006) it will be addressed as such throughout this paper.

One possible explanation for the lack of a clear definition of awe is that it is far easier to describe the object of awe, or that which puts a person at awe, than it is to describe the experience itself (Walter, 2004). Indeed, many scholars identify awe and write about it without offering a description of what they mean by awe (Atlis, Leon, Sandal, Infante, 2004; Curtin, 2005; Dillon, 2002; Düzgün, 2004; Fredrickson & Anderson, 1999; Frijda & Sundararajan, 2007; Oveis, Cohen, Gruber, Shiota, Haidt & Keltner, 2009; Saraglou, Buxant & Tilquin, 2008). Beit-Hallahmi and Argyle (1997) criticized religious scholars for this omission, stating that many religious scholars describe awe as a component of religious experience, but fail to elaborate on what they mean by awe. This same phenomenon has taken place in other fields as well, including recreation and leisure (e.g. Fredrickson and Anderson, 1999; Heintzman, 2006; Pohl et al., 2000), and education (Elshayyal, 2007; Myers, 2007). In recent years, attempts have been made to define awe, but the definitions offered have been theoretical and have not been based in empirical research. In this paper, I will consider the definitions of awe that exist in the literature and attempt to synthesize these definitions.

### *Systematic Definitions of Awe*

A complete literature search resulted in three unique, systematic evaluations of awe offering complex definitions that require detailed and specific attention. The first of these is Keltner and Haidt's (2003) prototype approach to awe which offers "specifiable components, themes and features" (p. 303) of this emotion. Keltner and Haidt indicated that awe is more of a family of emotions, rather than a single emotion to be defined. In Keltner and Haidt's definition, prototypical awe is derived from two necessary features: vastness and a need for accommodation. Vastness refers to something that is much larger than the self, physically, socially, or in some other way. Keltner and Haidt indicated a strong correlation between vastness and power stating that powerful things tend to be experienced as vast. Vastness may be experienced, for example, when one stands at the ocean's edge or on a mountaintop. Keltner and Haidt described accommodation as "the Piagetian process of adjusting mental structures that cannot assimilate a new experience" (p. 304). In other words, accommodation occurs when one is confronted with a situation with which one is completely unfamiliar and in order to make sense of it one must adjust mental schemas. While vastness and the need for accommodation are the necessary components of awe, there are a number of other components that may be considered in prototypical awe. Depending on the specific type of awe, certain additional features may at times be added or missing.

Keltner and Haidt (2003) offer five factors that differentiate the experiences felt in the "awe family" (p. 304). These factors are threat, beauty, ability, virtue and supernatural causality. Threat based experiences of awe are felt when danger causes an

awe experience to include feelings of fear. This may happen for example in the case of an electrical storm. Awe based in beauty may be felt when confronted with a beautiful vista; aesthetic pleasure is the dominant feature of this type of awe. Awe based in a person's ability may be felt when faced with someone of exceptional skill or talent. This is likely to induce some form of admiration. Extreme virtue found in a person may induce feelings of awe similar to what Keltner and Haidt refer to as elevation. Encountering Mother Teresa, Ghandi, or Martin Luther King, Jr. may have provided an example of virtue based awe. Awe derived from perceptions of supernatural causality may come from experiences in which one perceives that God or a supernatural entity of some kind is manifesting itself.

In considering Keltner and Haidt's description, Sundararajan (2009) offered an amendment to the prototypical awe, describing it as a coarse emotion and indicating the need for the development of a refined model of awe. She indicated that in order for people to experience a refined emotion they must be self-reflexive and capable of second-order awareness, or abstract thought and understanding of concepts. She proposed that, while Keltner and Haidt's prototypical awe predicts less frequent experiences of awe for people who have greater affective and cognitive resources, refined awe predicts the opposite, indicating that those with greater cognitive and affective resources will be more likely to experience awe as they reflect on experiences and encounters.

Halstead and Halstead (2004) offered a second detailed description of awe that is worthy of consideration. The authors differentiated between awe and wonder, describing them as twin terms that are often considered together. They stated that awe is both

narrower and broader than wonder. It is narrower in that it refers to a certain kind of wonder, and broader because it encompasses feelings beyond wonder. In defining awe, the researchers highlighted four specific elements of this emotion.

Halstead and Halstead (2004) argued first, that awe is an emotion that is felt in the face of something vast and more powerful than the self. Second, “awe involves wonder of a solemn or reverential kind” (p. 166). This may be in the presence of a person—perhaps a prince, a pope or a soldier. It may be in the presence of powerful artistic expression and it may, for many, be in consideration of deity or a higher power. This element of Halstead and Halstead’s definition is similar to Otto’s (1923) *mysterium tremendum* which may “lead to a self-surrender before God” (Halstead & Halstead, p. 167). A tinge of latent fear is the third element of awe described by Halstead and Halstead. This fear is described as a fear of something “vaster” (Halstead & Halstead, p. 167) and more powerful than oneself that has the ability to leave one helpless. The authors indicated the intimate connection between awe and fear as evidenced by the fact that the Hebrew and Greek word for awe is the same as the word for fear. It is interesting to note that, according to this definition, awe is a blending of extremes, combining admiration or delight and terror into one concept. Finally, awe includes “a response to what is perceived as powerful, inexplicable, vast or splendid in the natural world” (p. 167). This element of Halstead and Halstead’s definition is very similar to Keltner and Haidt’s (2003) description of vastness.

Although the definitions have some notable similarities Halstead and Halstead (2004) and Keltner and Haidt’s (2003) definitions of awe also differ in a number of

important ways. First, while Keltner and Haidt indicated that fear may be a flavor of awe that is present in some instances, Halstead and Halstead indicate that a latent fear, one that may or may not be realized, is a necessary component of awe. Similarly, the solemn wonder that Halstead and Halstead described is not necessarily present in all flavors of awe described by Keltner and Haidt. This solemn wonder may however be what Sundararajan (2009) was referring to as self-reflection when she indicated that refined awe experiences require one to look inward to explore how they fit into the experience and how the experience fits within them. Keltner and Haidt's description of a need for accommodation is also inconsistent with Halstead and Halstead's definition, which indicates that familiar settings are also likely to elicit awe.

A third definition of awe was provided in Ivanhoe's (1997) analysis of Heschel's (1955, 1965) views on awe. According to Ivanhoe, Heschel believed that awe is experienced whenever people view nature in what he called "the proper way" (Ivanhoe, p. 108). Heschel believed that awe would then lead people to God (Eisen, 1989). Much like Keltner and Haidt's (2003) need for accommodation, Heschel's sense of awe came from that which is incomprehensible when one's imagination, understanding and reason are overwhelmed. He also believed that awe can be experienced in contemplating the beautiful or the everyday, which is consistent with Halstead and Halstead's (2004) description of awe in that it indicates that awe can be experienced in the absence of accommodation. Heschel indicated that the sublime, that from which awe is felt, may be found not only in that which is overwhelming in size, but also "in every grain of sand, in every drop of water. Every flower in the summer, every snowflake in the winter, may

arouse in us a sense of wonder that is response to the sublime” (Heschel, 1955, as cited in Ivanhoe, p. 109). According to Heschel, awe requires that one be in the right frame of mind. This conceptualization of awe may be comparable to Sundararajan’s (2009) description of refined awe which requires self-reflexivity or second-order thinking.

In a contrasting statement, Heschel also suggested that awe is not a reflective judgment, rather an intuition. As Ivanhoe (1997) explained, feelings of awe are closer to perception than they are to judgment. People might shut their eyes to it if it did not thrust itself upon our consciousness. Heschel stated that “The imperative of awe is its certificate of evidence, a universal response which we experience not because we desire to, but because we are stunned and cannot brave the impact of the sublime. It is a meaning wrapped in mystery” (Heschel, 1965). Heschel noted that all people are capable of awe at times. Awe, then, is something that all people are capable of experiencing, but requires that one be in the correct frame of mind.

Further drawing on the teachings of Heschel, Ivanhoe (1997) described the importance of nature in eliciting awe. As Keltner and Haidt (2003) indicated, he stated that nature is an appropriate object of awe due to its (perceived or real) unruly power which poses a prominent threat to human beings. “The respect and awe we feel is grounded in the objective fact that Nature is dangerous and much more powerful than creatures like us. Such an emotional response is well warranted. Such respect for Nature is healthy in that it is essential to the task of successfully navigating through the world” (Ivanhoe, p. 111). According to Ivanhoe, awe is a natural response that includes a level of respect toward that thing which holds us in awe. Heschel stated, however, that “awe is

more than an emotion, it is a way of understanding” (1965, as cited in Ivanhoe, p. 116). He also claimed, “Awe, unlike fear, does not make us shrink from the awe-inspiring object, but, on the contrary, draws us near to it” (1955, as cited in Ivanhoe, p. 116).

This discussion raises the question of the apparently conflicting views regarding the element of threat or fear associated with awe. As stated above, Halstead and Halstead (2004) indicated that fear is one of the four key elements of awe. They noted that this particular type of fear is the “fear of something vaster than oneself, that can impinge on one’s life and leave one helpless” (p. 167). Keltner and Haidt (2003), however, stated that fear is not necessarily an element of awe and that other flavors of awe can be experienced without threat or fear being present. Similarly, other researchers (Ivanhoe, 1997; Konečni, 2005; Richie, 2005) who identified fear as an element of awe indicate that the fear cannot be such that it provides an overwhelming horror, which prohibits one from feeling awe. Instead the fear associated with awe must be one that is within one’s control allowing one to feel safe as well. The presence or absence of fear remains an area of disagreement that should be clarified in future definitions. As the discussions on this topic have been conceptual no evidence has been offered to provide deeper understanding of fear as an aspect of awe.

#### *Other Definitions of Awe*

In addition to the above scholars, others have explored awe and offered additional insight into this emotion. Adler and Fagley (2005) described awe as “a deep emotional, spiritual or transcendental connection to something” (p. 82). They described awe as representing “an emotional connection to the specialness of an experience” and “seeing

and feeling the spark of brilliance, beauty, grandeur, and value of something such as a sunset, a newborn child, or Niagara Falls” (p. 82). They indicated that awe is a manifestation of appreciating and tends to include feelings of being “swept away” by emotion, sometimes to the degree of speechlessness.

Schneider (2003) described awe as “the basic human capacity for the thrill and anxiety of living, or the cultivation of the capacity for humility and boldness, reverence and wonder before creation” (p. 135). He later (Schneider, 2008) described awe as a sense of the magnificence and mystery of living. According to Schneider (2008) awe is the “comingling of dread, veneration, and wonder that address not just separate aspects of our lives (e.g. shimmering mountain) but life itself, indeed existence itself” (p. 170).

Konečni (2005) described aesthetic awe, which he differentiates from awe, indicating that aesthetic awe is focused on great beauty, rarity and physical grandeur. Aesthetic awe, in Konečni’s definition, always brings the sensation of chills and feelings of being “touched.” The author placed awe among the fundamental emotions: fear, anger, joy, and grief. Fundamental emotions are pan cultural in expression; that is, they are recognized in similar ways across cultures. Because fundamental emotions are triggered by unambiguous stimuli they offer a specific object of focus. He stated that awe differs slightly from the other fundamental emotions in that it can be “turned off” if a person switches focus away from the stimulus (Konečni).

### *Disciplines Addressing Awe*

In their seminal exploration of awe, Keltner and Haidt (2003) discussed the early treatments of awe in the fields of religion, sociology, philosophy, and psychology. This

section of the paper will consider the research addressing awe in each of these fields as well as the fields of education and recreation. Scholars from each of these fields have identified awe as an emotion that may have unique and important impacts on people. Across disciplines scholars have indicated that awe is an important and meaningful concept that is worthy of further exploration.

*Religion.* Awe is often associated with religious experience. A number of researchers have hypothesized that feelings of awe may lead one to spirituality and religion (Haidt, 2006; Haidt & Keltner, 2004). In describing awe, several researchers draw on Otto's (1923) description of the *numinous*, or divine mystery. Otto argued that *Mysterium tremendum et fascinans*—the fearful yet fascinating mystery—leads to a numinous experience, which is the core of all religion. Halstead and Halstead (2004) indicated that *mysterium tremendum* is vastly different from ordinary human experience, stating that the only way to respond to the fearful mystery is with a sense of awe. Richie (2005) indicated that this *numinous* experience, consisting of *mysterium tremendum* and *fascinans* gives rise to feelings of awe, fear, or reverence. Like these researchers, Otto argued that awe is a significant element of spirituality and religion. Several other researchers have looked at awe in relation to various aspects of religion and religious experience.

In a recent article seeking to provide a contextual understanding of the term “religious experience,” Düzgün (2004) identified awe as one aspect of religiosity or spirituality. Identifying religious experience as something that is largely influenced by one's own culture and presuppositions, Düzgün stated that people first see things on an

empirical or experiential level, and then on a deeper level. A person confronted with an awe-inspiring scene, the vastness and beauty of the ocean, for example, may first be struck by the scene itself. As the person views this scene, the experience is then likely to be interpreted more deeply through that individual's perception. This deeper interpretation of the experience may draw on Sundararajan's (2009) description of the need for self-reflective thought as a facilitator of refined awe. For a religiously-minded individual this experience could be interpreted as a gift from God or a manifestation of God's creation. Düzgün indicated that awe in the context of a religious experience must open one up to intellectual consideration and reflection on moral obligation.

This idea was echoed in research that explored the experience of participants in short-term religious mission trips (Linhart, 2005). Participants in such trips were reportedly exposed to important sacred moments in which experiences were engulfed by a holy significance. Linhart described these sacred moments as moments of awe and wonder and indicated that exposure to such experiences gives purpose and direction to the lives of those who experience them. Similarly, Halstead and Halstead (2004) indicated that feelings of awe make people more receptive to "the divine law." Interestingly, they also noted that the impact of awe is not limited to morality, and that it can contribute as well to self-knowledge by providing perspective and deeper understanding.

Saraglou et al. (2008) attempted to provide empirical support of the connection between awe and spirituality. They hypothesized that attitudes toward religion and spirituality would be more positive after experiences of awe. In their research they

purported to facilitate feelings of awe in participants by showing them awe-inspiring videos, specifically videos of pristine natural spaces and childbirth. Subjects then rated their emotional response to the videos in terms of intensity and specific felt emotions and reported their personal religiosity and spirituality. Results indicated that, when compared to controls, those who viewed awe-inspiring images reported significantly higher levels of religiosity and spirituality afterwards.

*Sociology.* Historical views of awe in the sociological realm have considered how experiences of awe, as inspired by a heroic leader, may “stir the souls of thousands, reprogramming to take on heroic and self-sacrificing missions” (Weber, 1978, as cited in Keltner & Haidt, 2003, p. 299). Durkheim (1887/1972) also discussed the ability of powerful emotions, like awe to create political, social, and religious movements. Powerful emotions like awe may serve, according to Durkheim, as a means of binding one individual to another entity, like a community or a nation. Modern sociologists (Clark, 1990) have identified feelings of awe as a function of social status and indicated that feelings of awe serve to designate a person’s social status vis-à-vis another.

Other sociologists have also considered awe’s place in human relationships. Dillon (2002) indicated that children’s sense of awe serves to facilitate the adult-child connection by drawing adults into the child’s world. He stated that when adults consider a child’s sense of awe, wonder, and curiosity that their own view of the world is expanded. Another researcher (Walter, 2004) has identified the experience of awe toward the human body as causing people to look at their own bodies and those of people around them differently. He explored how Body Worlds, an exhibit in which human cadavers are

used to create an “educational and inspiring” art exhibit, impacted lay visitors. He noted that “some visitors report[ed] developing an anatomical gaze that is detached from neither emotion nor life, a gaze that is suffused with awe” (p. 480). Many who experienced this type of awe reported that this exposure to the human form caused them to see their own bodies, and for some, those of people around them, with a greater sense of awe. These people, accordingly, expressed an increased desire to be conscious of the miracle of the human body and to allow this to guide their treatment of the human body, their own or others’.

*Philosophy.* As Keltner and Haidt (2003) indicated, Edmund Burke’s (1757/1990) description of the sublime experience provides a thorough and systematic description of an awe-like emotion. Burke’s definition of the sublime described a powerful feeling that may be produced by literature, poetry, painting and viewing landscapes. This feeling is one in which thought is expanded and the mind is opened. According to Burke, the sublime experienced is triggered by stimuli that are both powerful and obscure, or difficult for the mind to grasp. Keltner and Haidt drew upon Burke’s sublime in describing the two necessary components of awe, vastness and the need for accommodation.

The recent philosophical writings which deal with awe are considerations and evaluations of what has been said by philosophers in earlier times. Ivanhoe (1997) provided a thorough description of Heschel’s philosophies and thoughts on awe. This work was described in a previous section of this literature review.

Additionally, in a philosophical evaluation of Heidegger's writings on fundamental or authentic moods, Staehler (2007) discussed awe as a fundamental mood. Fundamental moods, according to Heidegger, are moods that are not directed at a specific object, rather they are felt toward the whole world. Awe, according to Staehler, is derived from curiosity and is the mood that complements anxiety. Whereas anxiety is felt over nothingness, awe provides voice for the amazement that "there is something, rather than nothing" (p. 424). This description of awe as amazement over existence is somewhat limited in scope, but amazement over something is frequently recognized as an important element of this emotion (see Halstead & Halstead, 2004; Ivanhoe, 1997; Keltner & Haidt, 2003).

*Psychology.* In the past 10 years psychologists have given more attention to awe than researchers in any other field. Psychologists have worked to identify specific and defining characteristics of awe. Researchers (Shiota, Campos, & Keltner, 2003) explored whether or not unique aspects of facial expression are common among individuals experiencing awe. Haidt and Keltner (1999) also considered facial expression as they sought to determine if awe is a pan-cultural emotion. They noted that expressions of awe, for some participants, were confused with expressions of surprise. Whereas awe is often expressed with raised eye-brows and a gaping mouth, facial characteristics that may be similar to surprise, its expression typically includes a far off gaze that differentiates expressions of awe from expressions of surprise (Shiota et al.).

While the majority of the literature dealing with awe is conceptual in nature and lacking in empirical evidence, some researchers have conducted empirical studies that are

worthy of consideration. Shiota, Keltner, and Mossman (2007) conducted a series of studies to explore how people experience awe and to identify awe as a unique emotion. In the first study, researchers gathered personal narratives from the participants to explore how and when they felt awe. They found that study participants were most likely to experience awe in natural settings and that recollecting experiences of awe prompted participants more often than not to want to return to the outdoors. In this study they not only asked about people's experiences of awe, but they also asked about experiences of happiness and thereby determined that awe appears to be a qualitatively different experience from happiness. This difference is seen in that awe is likely to be elicited by information rich stimuli whereas happiness is more commonly associated with the anticipation of material and social rewards.

In a second study these researchers (Shiota et al., 2007) compared awe to feelings of pride. Findings indicated that awe and pride are unique emotions, rather than different dimensions of the same emotion. These researchers found that pride is likely to be experienced when one is successful in a socially-valued act that is likely to increase one's social status. They also describe that pride is associated with feelings of control and evaluating oneself as higher than one's peers. This is different from awe in that awe tends to be associated with an external stimulus and results in feelings of being small in the scheme of things (Keltner & Haidt, 2003; Shiota et al.). Shiota et al. found that people who experienced awe felt small, connected to something greater than themselves, unaware of other concerns, connected to the world around them and felt desires for the experience to continue.

Two additional studies reported by Shiota et al. (2007) identified a characteristic common among people who are prone to awe. These people tend to be capable of and willing to assimilate new information and rearrange their mental structures in order to accommodate such input. While these researchers purported to have experimentally elicited awe in one of their studies the methods used to do so are somewhat suspect and deserve additional scrutiny. A particular weakness in the methods was in the use of a contrived experience that was hypothesized to induce awe but was in fact more typical for the subjects than experiences that are likely to facilitate awe according to the authors own definition (Keltner & Haidt, 2003). The subjects in this study, a group of university students, were taken to a public display of a dinosaur skeleton on the campus of their own university, a place that many of them had visited in the past. This skeleton, being relatively vast, was said to be likely to induce awe. While Keltner and Haidt describe vastness as a key component of awe-eliciting stimuli, the familiarity of this skeleton and the contrived nature of the experience do not likely allow for the other necessary element of awe, the need for accommodation.

A few researchers have considered elicitors of awe. Oveis et al. (2009) considered proneness to awe as an important aspect of positive emotionality. Also considering the idea of positive emotions, Shiota et al. (2006) correlated proneness to various positive emotions including awe with the traits in the Big Five Personality Scale (Costa & McCrae, 1992). They found that awe is correlated with extraversion and openness to experience. While these findings may have important implications for those interested in awe, Shiota et al.'s measurement of proneness to awe has not been validated. No

reliability or validity is reported for the scale itself, but a Cronbach's alpha of .78 is reported on the awe sub-scale for the sample of 108 college students. More information is needed to understand the usefulness of this scale.

In considering how people in different mental states might experience awe and other positive emotions, Gruber, Culver, Johnson, Nam, Keller and Ketter (2009) compared self-reports of subjects diagnosed with bi-polar disorder with those of a nonclinical control group. They found that the subjects diagnosed with bi-polar disorder reported significantly fewer experiences of awe than nonclinical controls. Researchers indicated that their findings supported the importance of facilitating positive emotions in bi-polar patients.

*Education.* Some researchers have considered how awe may drive learning as well as teaching (Elshayyal, 2007; Myers, 2007). They indicated that approaching learning with a childlike wonder and standing in awe of a concept may drive learners and teachers to willingly delve deeper into a concept and to eagerly seek greater understanding. Others have argued that awe is a primary response to fate and tragedy (Halstead & Halstead, 2004) and that exposure to such ideas may enhance the way students view the world. Tragic drama, for example, may impact student's view of the control they have over what happens to them (Halstead & Halstead). Halstead and Halstead place particular focus on the implications an awe-based reaction to tragedy has on the spiritual development of youth in an educational setting.

Ashley (2006) called for a renewal of awe and wonder as a means of developing a valuable and valued approach to environmental education. Indicating that there is great

value in direct exposure to true nature as opposed to the “sanitized wonder of safe media images” (p. 97), Ashley argued that media depictions of nature and the tourist industry which poses as environmental education are imposters that teach false realities and thereby diminish the knowledge that is needed to understand the world and the environment around us.

Schneider (2008) suggested that bringing awe into the educational system has the power to facilitate a love of learning in students as well as to broaden and deepen knowledge and skill associated with any specialization or craft. Similarly, Lopez (2006) stated that teaching positive psychology including concepts of awe provides an opportunity not only to enhance knowledge in the short run but also to enhance quality of life over time.

*Recreation.* Awe has been largely neglected in the recreation literature. In the past decade, however, a number of researchers have identified awe as a result of engagement with backcountry and wilderness areas. Atlis et al. (2004) followed the experience of two women on a trans-Antarctic trek. Each of these women indicated in interviews with the researchers that the sense of awe they felt toward the environment provided them with a source of psychological strength during the trek. Fredrickson and Anderson (1999) took women on backcountry trips and the women reported feeling awe toward the pristine and remote characteristics of the environment. Many of the women attributed this feeling to being removed from society, and some related their feelings of awe to a sense or feeling of spirituality. They described “a mixture of awe and thrill of being exposed to the sheer powers of nature and a reawakened sensitivity towards the sights and sounds of nature”

(p. 26). Pohl et al. (2000) also reported that the women who participated in their study experienced natural awe and beauty in a wilderness setting. Heintzman (2006) studied a group of men during a backcountry canoe trip. Participants in this study reported feelings of awe and inspiration and attributed these to the beauty of the environment and to being removed from civilization.

The studies described above each indicate that awe provides potentially meaningful benefits. Many of these benefits are experienced in recreation settings and deserve the attention of recreation researchers and practitioners when exploring opportunities to provide more meaningful recreation experiences and to enhance people's quality of life. The next section of this paper will explore the benefits of awe in more detail.

### *Benefits of Awe*

Awe has been said to have potential "sweeping effects" (Strümpfer, 2007, p. 502) for those who experience it. It has been placed by some "in the upper reaches of pleasure" (Keltner & Haidt, 2003, p. 297) and by others as occupying a central place in spiritual development (Halstead & Halstead, 2004). Some believe that this powerful emotion has the capacity to "change the course of a life in profound and permanent ways" (Keltner & Haidt, p. 297). The above review of the literature suggests that scholars have indeed identified awe as a distinct, valuable and important emotional concept and have begun to seek to understand its depth and complexity.

Researchers have identified some significant and specific benefits associated with awe. Strümpfer (2007) described awe as a source of strength in times of transition and

indicated that awe may have a significant impact on how people judge a given situation. He suggested in fact, that experiences of awe may lead a person to view the world with greater optimism. Similarly, Adler and Fagley (2005) identified awe as an important aspect of appreciation and indicated that those who experience awe more frequently are likely to be more prone to feelings of appreciation. They additionally indicated that these people (those who frequently experience awe) are likely to have an appreciation for nature.

Awe is described as having a meaningful impact on religious or spiritual experience as well and has been credited by some scholars with bringing about spiritual receptivity. Düzgün (2004) indicated that awe opens people up to consideration and reflection of their moral obligations. Halstead and Halstead (2004) stated that awe has the power to affect behavior and makes people more receptive to divine law. Similarly, Linhart (2005) found that moments of awe provided participants in short term mission trips with purpose and direction.

Curtin (2005) stated that encounters with nature that facilitate awe have emotional, psychological and physical benefits and encouraged researchers to seek a greater understanding of these benefits. Scholars have indicated that awe contributes to one's appreciation of the world (Adler & Fagley, 2005), causes one to inspire others to embrace life (Dillon, 2002) and awe can increase one's desire to protect the environment (Ashley, 2006). Walter (2004) indicated that awe, in a broader sense, can cause a person to value the thing that elicits awe in the first place. Strümpfer (2007) stated that awe is a source of personal strength. This was supported by Atlis et al. (2004) who found that

women engaged in a difficult wilderness excursion found awe to be a source of psychological strength. Strümpfer also indicated that emotions in general influence appraisal of situations, and that positive emotions help to create more positive appraisals.

In further exploring the benefits of awe, Halstead and Halstead (2004) encouraged practitioners to facilitate awe, stating, “We can encourage young children to be aware of jewels in a dewdrop or the vastness of the night sky; to use fantasy techniques to become a bird soaring in the sky or to see a flower or experience a taste as if for the first time. Simply lighting a candle may create a world of wonder and awe” (p. 172-173). This statement indicates some of the joy and power associated with feelings of awe and indicates that awe may indeed open up the world to a child or an adult.

Schneider (2003, 2005, 2008) speaks to this power as well, indicating that awe has the capacity to facilitate increased passion in the everyday life of citizens. He suggested that creating opportunities for awe in the education system, the day-to-day work environments and the governing bodies of a country would create a revolution that would result in increased productivity, satisfaction, and psychological well-being and a healthier society in general. He suggested that such experiences would motivate students to learn more, employees to produce more, and civil servants to create better societies out of a passion for the exploration and the discovery of something more or something better. Keltner and Haidt (1999) indicated that awe as experienced in a group of people may give group members a sense of communal identity which would additionally contribute to the overall quality of life within a society.

## *Conclusion*

As can be seen in the hypothesized benefits and scholarly descriptions of awe, researchers place significant value on this emotion. While the existing literature describing awe and its benefits is speculative and lacks in empirical basis, a number of components are common across descriptions of this emotion. First, as described by Halstead and Halstead (2004) and Keltner and Haidt (2003), awe is recognized as an emotion. Scholars also agree that awe is a response to perceived vastness or power in the eliciting object (Adler & Fagley, 2005; Halstead & Halstead; Heschel, 1955, 1965; Keltner & Haidt). Awe is consistently identified with spirituality (Halstead & Halstead; Keltner & Haidt; Saraglou, et al) indicating both that awe enhances spirituality (Saraglou et al.) and that spiritually minded individuals are likely to experience awe (Halstead & Halstead).

Scholars have disagreed on the role of other constructs in the experience of awe. An element of fear has been identified across definitions but the nature of the hypothesized fear is not consistent. Scholars have described a latent fear (Halstead & Halstead), a fear that is present in only certain kinds of awe (Keltner & Haidt), and a fear that draws one near rather than causing one to shrink. Scholars have also disagreed about the role of psychological accommodation in experiences of awe, some indicating that this process is a necessary component of awe (Halstead & Halstead) and others indicating that awe can be experienced in small, everyday experiences (Heschel, 1955; Ivanhoe, 1997) that are neither unfamiliar nor psychologically overwhelming and therefore do not require accommodation to occur. These and other divergences in the existing literature

must be addressed in future research. As researchers continue to explore awe as a construct and seek to develop a useful and commonly accepted definition of this emotion such relationships must be considered and empirically supported or refuted. Because awe is frequently experienced during recreation, leisure scholars are in a position to contribute to the development of a more thorough definition of awe and a deeper understanding of this emotion.

*The case for understanding awe in recreation.* In spite of the potentially important role awe plays in peoples' experience of outdoor places and in spite of the prevalence of awe experienced in natural and wilderness recreation (Ivanhoe, 1997; Shiota et al., 2007), recreation scholars have largely ignored this important construct. Scholars continue to hypothesize about the benefits that may be derived from experiences of awe but little empirical evidence exists to support these claims.

Over the past few decades recreation scholars have placed significant emphasis on understanding the potential benefits derived from recreation. Driver (1997) indicated that one way leisure benefits are experienced is through the realization of a positive psychological experience. As recreation and leisure scholars continue to seek to understand the benefits of recreation as described by Driver and his colleagues (Driver, 2009; Driver, Brown & Peterson, 1990) it may indeed be important to understand the experience of awe as a positive psychological experience and to explain its contributions to quality of life and how it occurs during recreation.

Driver and his colleagues have indicated four main purposes of understanding leisure benefits: (1) to help leisure policy makers articulate the social benefits of

recreation, (2) to help park and recreation managers optimize the benefits experienced by visitors and participants, (3) to help leisure researchers and educators better understand the benefits and disbenefits (negative impacts) of leisure and to help them document these, and (4) to facilitate increased understanding of the role leisure plays in society (Driver, 2002; Driver, Bruns, & Booth, 2000). If leisure scholars can understand and document the potential benefits (and disbenefits) of awe and the role of awe in recreation they may be able to articulate an important social benefit of such experiences, to help park and recreation managers facilitate such experiences for their constituents, and to enhance societal understanding of another important role of leisure.

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CHAPTER FOUR  
AN EXAMINATION OF THE FUNCTIONS OF  
AWE IN THE OUTDOORS

## ABSTRACT

The broaden and build theory of positive emotions indicates that positive emotions broaden one's view of opportunities and build personal resources. Positive emotions are often experienced during recreation. Awe is one emotion that is experienced during outdoor recreation and that psychologists believe provides benefits. A collective case study was employed to develop a deeper understanding of the benefits of awe in the outdoors. A total sample of 15 participants from three different cases participated in qualitative interviews. Analysis identified a variety of social, emotional, and psychological benefits of awe. Findings enhance the understanding of awe and provide guidance for practitioners.

A wide variety of disciplines are concerned with quality of life. Parks and recreation is one field that concerns itself with issues related to quality of life (Kelly, 1996). In fact, the World Health Organization has indicated that availability of and participation in recreation and leisure activities is a key contributor to quality of life (World Health Organization, 1997). Those who study positive psychology also explore issues related to quality of life as they concern themselves with the understanding of positive human emotions and the nurturing of human strengths and virtues. Seligman and Csikszentmihalyi (2000) stated that such study allows for an understanding of those things that make life worthwhile. The knowledge gained from such study can be used by those working in human services to facilitate quality of life for all. This shared interest in positive experience and positive emotion points to an important potential relationship between the fields of positive psychology and recreation. One emotion that leisure scholars have identified as a potentially meaningful part of recreation experiences and that positive psychologists have begun to explore is awe (Keltner & Haidt, 2003; Shiota, Keltner & Mossman, 2007).

Awe has been described as a powerful emotion that may be experienced when one is confronted with stimuli that are vast and that require one to engage in the psychological process of accommodation. Scholars have hypothesized that awe offers a host of unique and valuable benefits for those who experience it (Halstead & Halstead, 2004; Keltner & Haidt, 2003). Leisure scholars have identified this emotion as an important element of recreation activities (Agate, 2010a; Fredrickson & Anderson, 1999; Heintzman, 2006; Pohl, Borrie & Patterson, 2000) and positive psychologists (Shiota et

al., 2007) have identified outdoor environments, which are common venues for recreation activities, as the settings in which awe is most frequently experienced. As scholars are beginning to recognize the important role awe plays in facilitating positive life experiences and contributing to quality of life it is important to develop a more complete understanding of this emotion. One area in which the understanding of awe is particularly lacking is in the understanding of the contributions of awe in a person's life, what More and Averill (2003) called its functions. Accordingly, the purpose of the current study was to explore the functions of awe in outdoor recreation settings to develop a greater understanding of the outcomes of such experiences.

#### Review of the Literature

##### *Quality of Life in the Fields of Recreation and Positive Psychology*

Researchers in the field of recreation have been concerned with issues related to quality of life for decades (Kelly, 1996). The World Health Organization has indicated that leisure and recreation activities are an important element in generating a high quality of life (World Health Organization, 1997). Kelly indicated that leisure may more greatly influence quality of life than any other life domain, and other scholars (Herzog & Rodgers, 1981; Kelly, Steinkamp & Kelly, 1987; Ragheb & Griffith, 1982) have highlighted the value of leisure in facilitating quality of life across the lifespan. Stebbins (1992) stated that leisure contributes to quality of life and enhanced well-being by facilitating feelings of accomplishment, and providing opportunities for enriching life, escaping problems, and feeling connected to the greater whole. Russell (1987, 1990)

stated that leisure satisfaction was the single strongest predictor of life satisfaction and perceived quality of life among aging adults.

The field of psychology has always been concerned with quality of life, but for a long time, researchers explored this concept with an “exclusive focus on pathology” (Seligman & Csikszentmihalyi, 2000, p. 5). Over a decade ago, Seligman (1998) said to the field of psychology as a whole, “I want to remind our field that it has been sidetracked. Psychology is not just the study of weakness and damage, it is also the study of strength and virtue. Treatment is not just fixing what is broken, it is nurturing what is best within ourselves.” With this prompt, Seligman and his colleagues (see Seligman & Csikszentmihalyi, 2000) stimulated the development of the field of positive psychology, “a science of positive subjective experience, positive individual traits, and positive institutions [that] promises to improve quality of life and prevent the pathologies that arise when life is barren and meaningless” (p. 5). The nurturing of human strengths and virtues that positive psychologists engage in facilitates a deeper understanding of those things that make life worthwhile and provides those working in human services with tools needed to facilitate quality of life for all. Positive psychologists have also devoted considerable effort to understanding the role of positive emotions in facilitating quality of life. One such theory that has been used to do this is the broaden and build theory of positive emotions.

*The broaden and build theory of positive emotions.* Fredrickson’s (1998) broaden and build theory of positive emotions asserts that positive emotions play two important roles for human well-being. First, positive emotions serve to broaden a person’s thought-

action repertoire, opening them up to new ideas, new relationships and new possibilities. This theory makes the case that positive emotions broaden one's scope of attention, cognition, and action, allowing a person to understand and make new connections and to identify new opportunities. Fredrickson (2001) indicated that "positive emotions broaden traditional modes of thinking or acting" (p. 220).

In addition to the broadening effect described above, positive emotions build lasting personal resources (Fredrickson, 2001) in the physical, intellectual, and social realms in a person's life. Socially, positive emotions facilitate enhanced human connections and cause people to feel included as part of superordinate groups. Such connections contribute to enhanced personal resources such as improved self-concept and the development of stronger social networks. Those who experience positive emotions are more likely to feel that life is meaningful and to interpret positive meaning from everyday experiences. The broadening and building effects of positive emotions described by Fredrickson (1998) have significant implications for improving quality of life.

People often experience positive emotional reactions during leisure. Such emotions include happiness (Hills & Argyle, 1998), peace (Kleiber, 2000), and excitement (Csikszentmihalyi, 1990). One emotion that is sometimes identified in leisure (Atlis, Leon, Sandal & Infante, 2004; Fredrickson & Anderson, 1999; Heintzman, 2006; Pohl, Borrie & Patterson, 2000) and that has begun to receive some attention among positive psychologists (Keltner & Haidt, 2003; Schneider, 2003, 2008; Sundararajan, 2009) is awe.

### *Benefits of Awe*

Awe has been described as a human emotion that may be felt when one is faced with stimuli that are extraordinarily beautiful or grand (Adler & Fagley, 2005) or that are vast and require one to engage in the psychological process of accommodation (Keltner & Haidt, 2003). (For a more thorough explanation of this emotion see Agate, 2010a.) Scholars have written that awe has potential “sweeping effects” (Strümpfer, 2007, p. 502) and that it may prompt powerful and permanent changes in the lives of those who experience it (Keltner & Haidt). Placing awe “in the upper reaches of pleasure,” Keltner and Haidt (p. 297) indicated that it may have powerful implications for quality of life.

Scholars have indicated that experiences of awe may provide emotional, psychological and physical benefits (Curtin, 2005). Awe may encourage a more optimistic outlook of the world and serve as a source of strength during difficult situations (Atlis, et al, 2004; Strümpfer, 2007). It may enhance feelings of appreciation in general and contribute specifically to an appreciation of nature and the world (Adler & Fagley, 2005). Scholars have hypothesized that this appreciation may, in turn, increase one’s desire to protect the environment (Ashley, 2006). While these scholars provided no empirical data to support their claims, their hypotheses agree with Heschel’s (1955) statement that feelings of awe may draw a person to the awe-inspiring object.

Keltner and Haidt (1999) indicated that groups who experience awe together may form a stronger sense of communal identity. Schneider (2003) described the importance of awe for communities and societies and indicated that a society that embraces awe may experience increased passion in everyday life, suggesting that awe may enhance

productivity, satisfaction, and psychological well-being and create a healthier society in general. He called for a societal shift that embraces and encourages awe, indicating that such experiences motivate people to learn more and produce more out of a passion for exploration and discovery.

Awe has been hypothesized to have a meaningful impact on religious or spiritual experience as well and has been credited by some scholars with bringing about spiritual receptivity. Düzgün (2004) indicated that awe opens people up to consideration and reflection of their moral obligations. Linhart (2005) found that moments of awe may provide one with purpose and direction and Halstead and Halstead (2004) stated that awe has the power to affect behavior and makes people more receptive to divine law. They encouraged practitioners to facilitate awe, stating, “We can encourage young children to be aware of jewels in a dewdrop or the vastness of the night sky; to use fantasy techniques to become a bird soaring in the sky or to see a flower or experience a taste as if for the first time. Simply lighting a candle may create a world of wonder and awe” (p. 172-173).

*Recreation systems theory.* Scholars continue to hypothesize about the functions of awe, or what awe can ultimately do for a person. More and Averill’s (2003) recreation systems theory, indicates that recreation activities may be understood as systems of behavior. Each activity has certain functions, which are the roles it plays within the larger system, mechanisms, which are those things that make the activity happen, and capacities which are the characteristics, or capabilities a person must have to engage in the activity.

While this framework was designed to guide the understanding of recreation activities, it may also prove useful in understanding awe.

Since very little empirical research has been conducted around the emotion of awe it is difficult to determine whether the current literature accurately describes the functions of this emotion as people truly experience them, or if what is being written fails to capture the scope of awe. Because scholars have indicated that awe is most frequently experienced in natural and outdoor places (Shiota et al., 2007) and that awe may have a significant impact on one's relationship with nature (Adler & Fagley, 2005; Ashley, 2006) this study focused specifically on awe in the outdoors which is broadly defined as awe that is facilitated by some aspect of the outdoor environment.

## Methods

### *Design*

A collective case study was used to explore the functions of awe in the outdoors. By using a case study the researchers was able to use multiple perspectives to develop an understanding of those things that facilitate awe in the outdoors. A collective case study is instrumental in nature, which allowed the researcher to explore a concept that was external to the cases. rather than exploring something specific about the cases themselves. The use of multiple cases allowed the researchers to develop a more complete picture of awe in the outdoors than would have been provided by a single case (Stake, 2005).

### *Cases and Participants*

A purposively drawn theory-based sample was employed to identify appropriate cases for the current study. Previous research has hypothesized that people with greater

cognitive and psychological resources (Sundararajan, 2009), and people who are spiritually minded (Ashley, 2006; Düzgün, 2004; Elshayyal, 2007; Halstead & Halstead, 2004) are more likely to experience awe. Three cases were selected for the study that reflected one or both of those characteristics. The first case was a hiking class from the Osher Lifelong Learning Institute (OLLI) which was selected because its members have a depth of experience to draw upon and display characteristics which indicate that they may be among those with greater psychological and cognitive resources (e.g. highly educated and seeking to expand knowledge through continuing education). OLLI is described as “a membership organization whose mission is to provide opportunities for ‘seasoned adults’ to further their knowledge in both academic and recreational pursuits” (Osher, n.d.). A camping and backpacking class taught at a highly competitive mid-sized land grant university in the southeastern United States made up the second case and was selected to draw from a different age group who may have many of the same characteristics as the first case (e.g. seeking education and significant psychological resources). The final case was a group of current and past Scoutmasters from a Boy Scout troop situated within a church in the Southeastern United States and was selected to represent a spiritual or religious perspective.

For each case, an initial voluntary sample of five participants was drawn, resulting in a total sample size of 15 participants. Had data saturation not been reached in the first set of interviews, the researcher was prepared to conduct additional interviews as needed. Study participants from the OLLI group included two males and three females between the ages of 64 to 70 years ( $M = 66.4$ ). All members of this group had some college

education and four of them had postgraduate degrees. Participants from the university hiking class also consisted of two males and three females. All were single and ranged in age from 19 to 21 ( $M = 20$ ). All of the Scoutmasters were married and ranged in age from 25 to 47 ( $M = 34$ ). All had some college education; four had completed bachelor's degrees. Pseudonyms were assigned to assure anonymity. More detailed demographic information can be found in tables one through three.

Table 1. *Demographic information for case #1: OLLI backpacking class*

Pseudonym	Gender	Age	Race	Marital Status	Education	Household Income
Barbara	F	64	White	Married	Doctorate	\$50,000-74,999
David	M	65	White	Married	Grad/Prof	\$50,000-74,999
Jacob	M	67	White	Married	Grad/Prof	\$50,000-74,999
Sally	F	70	White	Widowed	Some college	\$100,000-149,999
Susan	F	66	White	Married	Grad/Prof	\$75,000-99,999

Table 2. *Demographic information for case #2: University hiking class*

Pseudonym	Gender	Age	Race	Marital Status	Education	Household Income
Craig	M	21	White	Single	Some college	\$35,000-49,999
Haley	F	20	White	Single	Some college	\$200,000+
Jennifer	F	20	White	Single	Some college	<\$25,000
Lisa	F	19	White	Single	Some college	\$25,000-34,999
Steve	M	20	White	Single	Some college	\$75,000-99,999

Table 3. *Demographic information for case #3: Scoutmasters*

Pseudonym	Gender	Age	Race	Marital Status	Education	Household Income
Adam	M	41	White	Married	BA/BS	\$200,000+
Jared	M	47	White	Married	Some college	\$75,000-99,999
Matt	M	30	White	Married	BA/BS	\$35,000-49,999
Mike	M	27	White	Married	BA/BS	\$50,000-74,999
Thomas	M	25	White	Married	Some college	<\$25,000

*Data Collection*

Initial invitations to participate were issued through an email sent directly to the members of each case. For the OLLI participants the email invitation came from their affiliate OLLI office, the instructor of the university hiking class sent the invitation to the students, and the researcher sent a direct invitation to the Scoutmasters. The initial email informed potential participants that the study purpose was to explore how positive emotions are experienced in the outdoors and that they were being invited to participate due to their involvement in the class they were enrolled in or the Boy Scout troop they were affiliated with. The email described the requirements of participation which would include taking part in an interview to discuss their outdoor experiences. They were informed that initial interviews would take approximately 60 minutes and that there was a potential that follow-up interviews would be necessary. Interviews were scheduled with the first five volunteers from each case as they responded to the invitation. Additional

volunteers were informed that they would be contacted if further interviews were required. The time and location of the interview was chosen by each participant.

In an attempt to develop a greater understanding of the functions of awe in the outdoors semi-structured interviews were conducted with each participant. The guide questions for the interviews were developed based on the existing literature and the research questions of the current study. A panel of experts in the fields of recreation and psychology was employed to verify the appropriateness of the questions. During the interviews participants were asked to describe their experiences of awe in the outdoors and to identify specific elements of the experiences that may help develop an understanding of awe's functions. They were asked to identify any immediate, short, and long term impacts that they experienced as a result of feelings of awe in the outdoors. The semi-structured format of the interviews allowed the researcher the opportunity to probe for more detailed descriptions of the consequences of participants experiences. During the interviews, participants were asked to complete the Multiple Affect Adjective Checklist-Revised (MAACL-R) (Zuckerman & Lubin, 1985) and a supplementary form listing other possible emotions that the literature suggests may be present during experiences of awe. These forms were used to prompt consideration of emotions that may or may not have been experienced in conjunction with awe. No quantitative analysis of either form was conducted, rather identified emotions were used to prompt further discussion during the qualitative interviews to provide an understanding of other emotions that may be a catalyst for or consequence of experiencing awe. The interviews

lasted between 44 minutes and 83 minutes ( $M = 61$  minutes). The researcher stopped scheduling and conducting new interviews when data saturation was reached.

### *Data Analysis*

Inductive analysis and a constant comparative method were used to analyze the data (Denzin & Lincoln, 2000; Johnson & Christensen, 2004; LeCompte & Preissle, 1993; Ryan & Bernard, 2000). This method has been described as “immersion in the details and specifics of the data to discover important patterns, themes, and interrelationships” (Johnson & Christensen, p. 362). In this method analytical principles are used to guide the researcher in exploring new findings then confirming such findings in the data. Open coding was used to draw applicable topics from the data after which axial coding guided the structuring of these topics into themes. Main themes and subthemes were synthesized to develop a single overall theme (Strauss & Corbin, 1990). Portions of the data and initial findings were shared with an external auditor who assisted in revision and further development of the themes.

### *Reliability and Validity*

A research plan was followed to increase the reliability of the study (Henderson, 2006). The researcher adjusted the research plan as needed throughout the study and documented any changes that were made in a thorough audit trail. As suggested by Henderson and Guba and Lincoln (1981) the external auditor was also used during the data analysis process for purposes of increasing reliability.

The researcher employed a number of methods to ensure the validity and reliability of the study. To ensure external validity the researcher followed the

recommendations of Henderson (2006) by developing a thorough familiarity with the research literature dealing with awe and the literature surrounding the benefits of outdoor recreation. As Henderson also suggests, the researcher's familiarity with outdoor settings contributed to the external validity of the study. Knowledge of this literature and these settings supported the analysis of research data and helped ensure that proper conclusions were drawn about findings and their generalizability. Internal validity was ensured through the use of guiding research questions, a carefully kept audit trail, and undergoing an ongoing process of personal reflexivity (Henderson) which helped to manage any researcher biases. To ensure the face validity of findings the researcher conducted member checks (Wyman, 1985) in order to verify that research findings were indeed representative of the participants' experiences. Specifically, findings were shared with all participants either via email or in person and participants were asked to indicate if the themes were representative of their own experiences of awe. An external auditor (Guba & Lincoln, 1981) also assisted as described above.

## Results

The following overall theme emerged from the data: experiences of awe in the outdoors appear to offer a wide variety of social, emotional, and psychological benefits that contribute to quality of life. A total of eight specific categories of benefits were identified in the data. These will be presented below as main themes. These main themes were: (a) awe in the outdoors motivates, inspires, and empowers people to act, (b) awe in the outdoors provides an escape from everyday life, (c) awe in the outdoors makes one contemplate life and existence, (d) awe in the outdoors strengthens relationships, (e) awe

in the outdoors increases respect of nature, (f) awe in the outdoors facilitates learning, (g) awe in the outdoors creates lasting positive memories, (h) awe in the outdoors draws one back to nature.

*Awe in the Outdoors Motivates, Inspires, and Empowers People to Act*

Many of the participants in this study indicated that experiences of awe were inspiring or motivating. They indicated that awe in the outdoors tends to create in them a desire to act. When discussing the various emotions that they sometimes feel in conjunction with awe Haley described this phenomenon, saying , “[ awe in the outdoors] is an inspiration, inspiring you to do more stuff like that and not just waste days doing nothing in the future” and Adam said “those things give you inspiration to do something because of this. It’s almost like there is an after effect.” Barbara told a story about when she realized the importance of making such moments happen.

I took my boys once to go pick strawberries and I made a little smart remark to them that I needed to be home cleaning house, and a lady, a grandmother probably my age now, and she turned to me and said ‘honey remember this moment in time because they won’t have it again with you. That dust will always be in your house’ and that’s probably when I started paying attention. She was right. If you are going to teach them that moment is going to be gone so get out and start teaching them about the outside world and not cleaning house. So I had to change my focus. Housekeeping can wait.

She went on to describe how continued experiences of awe in the outdoors with her children motivated her to continue taking them out into nature.

### *Awe in the Outdoors Provides an Escape from Everyday Life*

Participants described the experience of awe in the outdoors as a powerful escape from everyday life. They stated that experiencing awe enhances the feeling of separation from the daily routine that being in nature offers. Many participants explained that the experience of awe in the outdoors facilitates a potent stress relief having a calming, quieting, and relaxing effect. Haley described the peace of awe in the outdoors, stating that it happens, “Because you’re not stressed about anything, it’s just like a break from everyday life,” and that “It’s like a release kind of... like not thinking about grades, grad school or job or whatever. Because you can see the bigger picture of it doesn’t matter if you didn’t make an A.” Sally said that moments of awe in the outdoors “make you forget your problems” and Barbara described the way that this relaxation allows her to savor the experience. She described, “Its peaceful and calm, not rushing, so you get from point A to point B, it takes you an hour longer, so what, you learned a lot in that extra time you know.”

Steve described this peace and calming effect of awe in the outdoors, but also indicated that there is an enlivening effect that occurs at the same time. He said that when he experiences awe in the outdoors he is, “Calm because you are kind of...it’s relaxing, calm, a peaceful sense running through you then again I feel shaky because it’s exciting, you are kind of jittery your adrenaline gets pumping.” Barbara described the enlivening effect of a particular experience of awe in the outdoors stating that it made her feel alive, energetic, and enthusiastic. She described this experience as follows:

We were out on the boat and I looked up and saw a bald eagle and I knew it was a bald eagle because the sun hit it. And I had never seen one flying. Sometimes you say you wish something would happen you know and I had shortly before that said I sure would love to see a bald eagle. And there it was, the when sun hit it, the brightness and all, I felt alive, like somebody listened to what I was saying.

Sally indicated that this enlivening effect can last for a long time after the experience. She described her experience on an African Safari and the awe that she felt and indicated that, even though it was some time ago, she was “still living on a cloud from that.”

*Awe in the Outdoors Makes One Contemplate Life and Existence*

Study participants described an evocative effect of awe in the outdoors indicating that it leads one to ponder and to “contemplate things about life...your existence” (Adam). Participants indicated that this contemplation may come from offering a new perspective, facilitating spiritual consideration, or just listening for something different. Adam indicated that awe in the outdoors, “puts things into perspective” and Steve described the experience of “Sitting on top of that mountain looking out you are stunned that you are not up there high seeing all around all the time, when you look down it’s a different perspective.” Jared described that these experiences help him to “understand your purpose in life of where you are coming from and where you have been and where you have the potential to go to.” He further described the new perspective offered by the “mountain top experience” and indicated a spiritual component to the experience. He said,

I guess it reflects back to that there is a God and you look at things from God's perspective because you are up so high looking down on everything. You see a wider picture of the creations on the earth than you do in your little hole, here I can see a little bit, up there I see a vast wider view that's not blinded by a hill or a tree.

Jennifer described a similar reaction, saying,

I get what they call that spiritual high. It's almost like these experiences within that short amount of time, that day or that week, you are able to get to that peak and see how awesome and glorifying God is.

Describing one component of the altered perspective and the spiritual consideration that awe in the outdoors may elicit, many participants said that such experiences prompt them to slow down and to listen. Steve indicated that "being out in the woods" and experiencing awe facilitates for him, "a very slow pace, in no hurry to say anything. You just want to listen instead of be heard." Similarly, Matt described an experience of awe in which he felt particularly inspired stating that such moments allow him "to sit and just listen" and to "be patient for the answers I was looking for at the time." This listening is an important element of contemplating life and emerged as a common element of the experience of awe in the outdoors.

#### *Awe in the Outdoors Strengthens Relationships*

Participants described a social nature to their experiences of awe in the outdoors and indicated that there is value in sharing the experiences with others. Some participants described a special bond that can be experienced when confronted with awe-inspiring

stimuli. Adam described a time when he shared some powerful outdoor experiences with a group of Scoutmasters and indicated, “There is a bond there. Something was formed and we could talk about stuff. There was a social aspect to [the experience].” When asked if being alone or with others influences her experiences of awe, Jennifer said that during such experiences she,

like[s] the enjoyment of community and fellowship with other people that are around. It’s interesting to see how they react to what they see and how they feel compared to how I feel and you can see things in a different light.

David described the importance of having his wife present during experiences of awe both for the experience itself and for their relationship. He indicated that his experiences of awe are more powerful and longer lasting when he can share them with his wife. He described a number of times when he felt awe without her and he said

I will have that sense of ‘oh, isn’t this beautiful? I sure wish she was here to see this with me.’ It was a continuum of thought. Right from ‘isn’t this pretty’ to ‘I wish she were here to enjoy this. We’ve got to come back so she can see this.’

He said that sharing the experiences increases feelings of affection in the relationship. He also said

I guess it’s a longer lasting ‘ahh this is beautiful’ because I don’t have the following thought of I wish she were here to see this. How do I get her out here? And then I’m off to the logistics of how to get her out here to see this.

### *Awe in the Outdoors Increases Respect of Nature*

Several of the participants expressed that their experiences of awe in the outdoors resulted in a recognition of the power of nature and an increased respect for the natural world. Steve indicated that through such experiences he, “feel[s] more connected to the earth, to Mother Nature” and Jacob described a number of encounters with awe in the outdoors, saying, “Nature is awesome I think. The power of nature never ceases to amaze me; the idea of hurricanes and tornados and stuff like that.” Jared described his experience of being caught in an island thunder storm and described his thoughts as follows:

In everyday life when you are in your own home, it could rain and pour and you don't understand sometimes, I live in a brick house and its very quiet in here, you don't hear a lot of things outside, so when a storm comes you forget how strong mother nature is and when you are outside and all you have is a piece of canvas, it makes it more magnified because you are right there with it. It's different. I used to be out in storms a lot as a kid and storms don't normally bother me. It just brought to light, made things closer to life and sometimes makes you realize how fragile life is that we sometimes forget.

One important after-effect of this realization of nature's power and the increased respect for nature that appears to come through the experience of awe in the outdoors is an increased environmental ethic. Many of the participants indicated that their experiences of awe in the outdoors motivated them to take care of the special places where they had the experience. Sally said, “I feel privileged to have these opportunities

close by and I always hope that they will stay unspoiled so that others can enjoy them.” Jennifer stated, “Just when you see the creation and see the beauty that’s around you it makes you want to be able to preserve and keep that so that other people can experience it.”

#### *Awe in the Outdoors Facilitates Learning*

Participants also indicated that they learn and grow from experiences of awe. Two different types of learning were described by the participants. The first of these is gaining new knowledge which may come from observing a phenomenon and then somehow understanding more about how the world works or why things are the way they are. Steve indicated that this process of awe in the outdoors allows him to “open [his] mind to learning and to seeing,” and Mike said that “learning about what you are seeing can enhance [the feeling of awe].” Jared described awe as “whatever I am supposed to learn today. Sometimes it’s up; sometimes it’s not as great, but you always experience something... always learn something new.” Barbara described a different level of learning, beyond gaining new knowledge about the earth and the environment, rather learning and developing character. She described how experiencing awe related to the trees in a forest or in a seed growing in the soil can teach her “what it takes to grow goodness, meanness, togetherness.” The feeling of awe, she said, opens one up to this kind of knowledge.

#### *Awe in the Outdoors Creates Lasting Positive Memories*

Participants reported that their experiences of awe in the outdoors have resulted in lasting positive memories that they can draw upon in the future. Matt indicated that these

memories can be very vivid. Describing an experience that happened over fifteen years ago, he said, “I remember the exact island, what it looked like, what the waterways looked like, I remember that there was a bear swimming across from one side to another.” Susan described an experience of awe when she was watching a stream flow. She stated,

I think that just sitting there looking at the beauty of the color of the leaves and hearing the trickle of the water, to me, there again it was just taking in the beauty and storing that memory so that here months later I can see it. I don’t know if that has something to do with... as we age you know? When you are younger you are in such a hurry and you don’t worry about those things. You just look and move on, but I think we start storing up memories because sometime in the future thinking I may never see this again. So there it is. It is just sort of painting that picture in your mind so those kind of little experiences go in there too.

David described the positive and strengthening experience of remembering awe in the outdoors, saying, “Every once in a while I can look back and say ok just relax and get that back in your head.”

#### *Awe in the Outdoors Draws One Back to Nature*

According to study participants, awe in the outdoors forms a special bond between the person and the place where the awe was felt. Referring to a time when she watched the sun rise over a foggy lake near her college town, Lisa described this phenomenon, stating,

I think it puts [this town] for me in a different perspective. Because whenever I remember [this town] I will remember that sunrise or the sun coming up in the mornings. I think it makes me feel closer to the town. I think it makes me feel like this is truly my home. I don't go home just because I feel like I'm supposed to be here.

David described this as well when talking about the American Desert Southwest, an area that he finds particularly awe-inspiring. He described visiting a different part of the American West and feeling drawn back there: "After we got done seeing our son in [Washington], we drove down through Utah and down through Moab and on to Albuquerque. I had to get there. I had to get my fix of the Desert Southwest."

This bond with nature that is facilitated by awe may also be more broad in that an experience of awe in the outdoors may simply bond a person to nature in a global sense and draw them into the outdoors in general. Jennifer said that awe in the outdoors "just makes me want to go out and see more and go if I thought that was a really incredible experience I would go back to there or go to another place and see what was out there."

#### Discussion

Findings from the current study provide empirical support for many of the hypothesized benefits of awe and offer new knowledge in terms of a more detailed understanding of how such benefits are derived through awe in the outdoors. Findings also have important implications and point to the potential role experiences of awe may play in facilitating quality of life.

### *Discussion of Findings*

*Benefits of awe.* As described above, scholars have hypothesized that awe may offer significant and important benefits. The current study identified eight categories of benefits, a number of which align with the benefits suggested by previous scholars. Current findings suggested that awe in the outdoors can increase one's respect for nature including a desire to protect and care for the natural environment. These findings coincide with previous suggestions about the capacity of awe to facilitate an appreciation of the natural world (Adler & Fagley, 2005) and to motivate in people an environmental ethic (Ashley, 2006). Findings also suggest that awe in the outdoors facilitates a human-nature bond that draws people back into the natural world. This supports Heschel's (1955) claim that feelings of awe draw a person to the awe-inspiring object and Shiota et al.'s (2007) claims that recollections of awe in the outdoors prompt people to return to the place where the emotion was experienced.

Findings of the current study which indicate that awe in the outdoors tends to motivate people to action and encourages contemplation of life and existence support the hypotheses of Atlis et al. (2004) and Strümpfer (2007) that awe serves as a source of strength and encourages a changed or more optimistic outlook on life. The tendency found in the current study of awe in the outdoors facilitating stronger human relationships also aligns closely with what Keltner and Haidt (1999) suggested about the awe's capacity to facilitate a stronger sense of communal identity. This finding may also have some bearing on Schneider's (2003) suggestions about the potential of awe to facilitate a shift in societal values. Schneider's recommendation for an awe-based education system

that embraces opportunities for awe as a means of teaching concepts may also find support in the finding of the current study indicating that awe in the outdoors facilitates new knowledge and learning.

*Quality of life.* The remaining findings of this study may be encompassed in an overall recognition that awe in the outdoors enhances quality of life. Participants in the study described awe in the outdoors as a powerful escape from everyday life that provides lasting positive memories which tend to be associated with positive experiences and positive emotions. Participants attributed specific positive emotions to their experiences of awe in the outdoors, including but not limited to alive, lucky, happy, appreciative, grateful, hopeful, joyful, and curious. Study participants described these positive emotions as contributing to a higher level of life satisfaction and a higher quality of life. Practitioners and scholars may benefit from a recognition of this function of awe and an understanding of how this occurs.

*Broadening and building nature of awe.* The findings of the current study also provide support for the broaden and build theory of positive emotions (Fredrickson, 1998). The broadening effect of awe is represented in its tendency to motivate and inspire people to take action—to recognize new opportunities and strive for something more. This is also seen in awe’s capacity to make people contemplate and examine their lives and the teaching nature of awe, through which people gain new understanding of the world around them again opening people up to new opportunities and new possibilities. The capacity of awe to build lasting personal resources is represented in its tendency to build lasting meaningful memories, strengthen relationships, and provide an escape

which refreshes and relaxes the mind. These findings support the role of awe as an important positive emotion that may contribute to a meaningful life and provide further support for the applicability and value of the broaden and build theory of positive emotions.

### *Implications*

The current study provides a new understanding of how awe in the outdoors contributes to overall quality of life. This increased understanding of quality of life speaks to the powerful potential contribution recreation researchers can offer to the knowledge of what makes life worth living. A strengthened emphasis on positive emotions and quality of life may facilitate a bridge between leisure scholars and positive psychologists that may place increased value on the contributions of recreation. Further consideration of recreation's role in facilitating positive emotions and enhancing human strengths may continue to strengthen this relationship as well.

The current study adds to the body of literature by offering empirical evidence for the valuable role awe in the outdoors can play in people's lives. As more is learned about the functions of awe in the outdoors scholars and practitioners will be better able to build an argument for facilitating such experiences through specific programming. As recreation service providers then learn to facilitate experiences of awe they may have an increased impact on their constituents' quality of life.

The current study also has important implications for connecting people with nature. Richard Louv's (2005) book, *Last Child in the Woods: Saving our Children from Nature Deficit Disorder*, brought attention to the disconnect that today's children (and

people of all ages) are experiencing with nature. Louv described the works of many scholars who have found that exposure to nature provides many of the developmental experiences that positive psychologists are calling for. Since Louv brought the issue of Nature-Deficit Disorder to a national stage, practitioners, scholars, and policy makers have focused significant efforts on reconnecting people with nature. Recently, Henderson and Bialeschki (2010) recognized the impact of Louv's book in sparking a national dialogue about the importance of the human-nature connection. Accordingly, they dedicated a recent volume of *Leisure Sciences* to people's relationship with nature in which they and other scholars discussed the importance of nature based recreation in enhancing the lives of all individuals. In a further attempt to facilitate the human-nature connection, the *No Child Left Inside Act of 2009* (H.R. 2054, 2009; S. 866, 2009) was introduced as potential federal legislation to enhance opportunities for children and adolescents to become acquainted with nature. This back to nature movement may produce the kind of experiences that will provide people with opportunities to experience awe in their lives. The current study indicates that experiences of awe in the outdoors may draw people to nature and facilitate the missing human-nature connection described by Louv (2005) and others.

#### *Limitations and Future Research*

It is important to note that this study's exploration of awe, while guided by previous research, was not driven by a single, parsimonious definition of the emotion. As indicated above, the current research provides new empirical findings to enhance the existing understanding of awe. These findings contribute to the development of a usable

and broadly accepted definition of this emotion that will help to guide future study. Such a definition, however, does not exist and should be developed through further exploration of awe.

The current study employed a theoretical sampling procedure in order to recruit a group of study participants that were likely to provide a deep and meaningful understanding of the functions of awe in the outdoors. The resulting sample, while diverse in age and experience, lacked in racial and socioeconomic diversity. Future awe research would likely benefit from a more diverse sample in an effort to understand how awe is experienced by people from a wide range of backgrounds.

Recreation systems theory (RST) (More & Averill, 2003) offers a framework for understanding recreation activities. This theory describes three characteristics common to all recreation activities. These are the functions of an activity (the consequences the activity brings about), the mechanisms of an activity (that which enables the activity to happen), and the capacities of an activity (the abilities a person must possess to successfully engage in the activity). Existing research has explored the mechanisms of awe (see Agate, 2010b) and the current study investigates the functions of awe. Future studies should explore the human capacities that make one likely to experience the emotion.

The current research represents an important step in understanding the functions of awe in the outdoors. While the best approach for answering the question of the current study was a qualitative approach, such methods are limited in the ability to generalize findings. The rich understanding of the human experience of awe in the outdoors that is

offered in the current study, however, helps to further develop the academic understanding of this emotion. This understanding should be used in the future to develop a cohesive and parsimonious definition of awe that manages to capture the complexity of the emotion. Quantitative methods must also be applied to the exploration of awe through the development of a means to quantitatively measure the experience of awe and consequently develop a deeper understanding of this emotion. Such an understanding will assist recreation researchers and practitioners as they seek to facilitate an enhanced quality of life.

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CHAPTER FIVE  
AN EXAMINATION OF THE MECHANISMS OF  
AWE IN THE OUTDOORS

## ABSTRACT

Awe is a positive emotion that is often experienced during outdoor recreation and that provides important benefits. In order to develop a deeper understanding of that which facilitates feelings of awe a collective case study was conducted. The sample consisted of 15 participants who were selected from three different cases. In-depth qualitative interviews were conducted with each participant and data analysis indicated that various environmental, individual, and social factors contribute to experiences of awe in the outdoors. Findings add new information to the academic understanding of awe and offer guidance for practitioners who seek to provide such experiences.

Discretionary time makes up a significant portion of most people's lives. How one chooses to fill this time can have a significant impact on one's quality of life. People often seek to fill their free time with recreation and leisure activities that are meaningful to them. In fact, the World Health Organization (WHOQOL, 1997) has indicated that opportunities for and participation in recreation and leisure activities are necessary and significant contributors to quality of life. One way that recreation activities may facilitate quality of life is through the positive emotions that are often generated during recreation participation. One positive emotion that is sometimes experienced during recreation activities is awe.

Awe is described as a powerful emotion that is experienced when one is confronted with stimuli that are vast and that require one to engage in the psychological process of accommodation (Keltner & Haidt, 2003). Such stimuli may be found, for example, in encounters with exceptional people or masterful works of art, during powerful spiritual experiences, or when confronted with the beauties of the natural world (Keltner & Haidt). Experiences of awe have emotional, psychological and physical benefits (Curtin, 2005). Researchers have indicated that people, when asked to recall experiences of awe, most frequently reported experiences in nature and outdoor spaces and that those who reflected on and described such experiences expressed an immediate desire to return to the outdoors (Shiota, Keltner & Mossman, 2007). While scholars in the fields of psychology and leisure (as well as other fields) recognize awe as a meaningful emotion that may contribute to improved quality of life, little is known about the mechanisms of awe, or what factors facilitate this emotion. The purpose of the current

study was to explore the mechanisms of awe in the outdoors in order to provide a more complete description of those things that contribute to feelings of awe during outdoor recreation experiences.

## Literature Review

### *Definitions of Awe*

Although a consistent and parsimonious definition of awe does not currently exist in the literature, scholars have indicated that awe is a powerful positive emotion that may make important contributions to a happy and healthy life. Awe has been described as a possible reaction to beautiful or majestic stimuli (Adler & Fagley, 2005) or a reaction to that which is vast and utterly unfamiliar (Keltner & Haidt, 2003). It may be that a common definition has not been adopted because it is much easier to describe that which inspires awe than it is to describe the elements of the emotion. Scholarly writings often identify awe as an element of certain experiences without describing what is meant by awe (Atlis, Leon, Sandal, & Infante, 2004; Curtin, 2005; Dillon, 2002; Düzgün, 2004; Fredrickson & Anderson, 1999; Frijda & Sundararajan, 2007; Heintzman, 2006; Oveis, Cohen., Gruber, Shiota, Haidt & Keltner, 2007; Pohl, Borrie, & Patterson, 2000; Saraglou, Buxant & Tilquin, 2008).

Recent attempts to define awe have resulted in theoretical descriptions lacking in empirical support. One scholar noted that even the authors of such definitions have indicated that their descriptions are convincing but speculative and not based in empirical findings (Saraglou et al., 2008). As scholars continue to offer conceptual and theoretical descriptions of awe the definitions that are provided remain fragmented and inconsistent.

This may be due in part to the fact that the empirical study of specific positive emotions has only begun (Shiota, Keltner, & John, 2006; Shiota et al., 2007) and additional work is needed to understand awe and other positive emotions.

To date, the most thorough and sweeping attempt at defining awe is found in the prototype perspective introduced by Keltner and Haidt (2003). In their definition, Keltner and Haidt offered specific components, themes and features of awe. They indicated that all experiences of awe consist of two necessary features, a perception of vastness and a need for accommodation. Vastness is perceived in that which is much larger than the self (e.g. physically, socially, or conceptually) and is often experienced in things that one perceives as exceptionally powerful. Accommodation is meant in the Piagetian sense of adjusting mental structures to assimilate the newly confronted reality. These types of stimuli may be encountered, for instance, when standing in front of a giant redwood for the first time. Additional components may exist in experiences of awe, resulting in unique flavors of this emotion. Keltner and Haidt identified five specific flavoring factors. These include threat, beauty, ability, virtue, and the supernatural.

Each of these flavors of awe may create a different type of reaction, all similar enough, however, to be considered part of the awe family of emotions. Threat based awe may be experienced when a sense of danger introduces feelings of fear into the emotion. This type of awe may occur, for example, when one views a hurricane approaching the coastline. Beauty based awe may occur when a person stands at a beautiful vista. Awe based in a person's ability may come about when one watches a person of exceptional skill or talent. Awe based in other's abilities is likely to induce some form of admiration.

Being exposed to a person of extreme virtue, such as Mother Teresa or Gandhi, may bring about feelings of awe that Keltner and Haidt refer to as elevation. Awe based in perceptions of supernatural causality may come when one perceives the presence of God or a supernatural entity of some kind.

Sundararajan (2009) built on Keltner and Haidt's (2003) description of prototypical awe, indicating that the awe they described is a coarse or unrefined emotion. She indicated that refined emotions occur when a person is self-reflexive, detached, and capable of second-order thinking and thereby offered a refined model of awe. The self-reflexive consideration of an environment, when detached from the reactivity of the moment, opens a person to an introspective consideration of the experience, contemplating one's role in the experience and what the experience may mean.

Halstead and Halstead's (2004) definition of awe takes a somewhat different direction than that of Keltner and Haidt (2003). They indicated that all experiences of awe consist of four specific and unique elements. First, awe is an emotion that is felt in the face of something vast or more powerful than the self. Second, "awe involves wonder of a solemn or reverential kind" (p. 166). Awe, according to Halstead and Halstead, is a certain kind of wonder that encompasses other feelings as well. Third, a tinge of latent fear is a part of feeling awe. They described this fear is a fear of something that is more powerful than oneself and that has the ability to leave one helpless. Finally, Halstead and Halstead indicate that awe is a response to something in the natural world, something that one may perceive as powerful, inexplicable, vast or splendid. One important difference between Halstead and Halstead's definition and Keltner and Haidt's is the place of threat

or fear in experiences of awe. Both describe a sense of fear that is a response to something that is vast and powerful, but Halstead and Halstead indicate that this is a constant element in awe whereas Keltner and Haidt describe fear as an element only of a certain flavor or type of awe.

These scholars also diverge from each other in how they view the role of nature in eliciting awe. Keltner and Haidt (2003) identified nature as a possible elicitor of awe, recognizing that other things, a charismatic leader or a masterful work of art for example, might also induce awe. Halstead and Halstead (2004) limited elicitors of awe to things that occur in the natural world. According to Ivanhoe (1997), the important role nature plays in facilitating awe is one that was also recognized by Heschel (1955) who indicated that awe is the emotion people experience whenever they “view nature in the proper way” (Ivanhoe, p. 108). Making a case for the connection between the role of nature and the place of fear in awe, Heschel (1965) stated that nature is an appropriate object of awe due to its unruly power which poses a prominent threat to human beings.

The respect and awe we feel is grounded in the objective fact that Nature is dangerous and much more powerful than creatures like us. Such an emotional response is well warranted. Such respect for Nature is healthy in that it is essential to the task of successfully navigating through the world. (as cited in Ivanhoe, p. 111)

He also claimed, “Awe, unlike fear, does not make us shrink from the awe-inspiring object, but, on the contrary, draws us near to it” (1955, as cited in Ivanhoe, p. 116).

Heschel's description of awe has similarities to the need for accommodation described by Keltner and Haidt (2003) as he indicated that awe occurs when one's imagination, understanding and reason are overwhelmed. On the contrary, however, he also provides an argument for Halstead and Halstead's claim that awe can be experienced in more common encounters, as he believed that awe can be brought about in contemplating the beautiful or the everyday. Heschel indicated that the sublime, that from which awe is felt, may be found not only in those things that are overwhelming in size, but also "in every grain of sand, in every drop of water. Every flower in the summer, every snowflake in the winter, may arouse in us a sense of wonder that is response to the sublime" (Heschel, 1955, as cited in Ivanhoe, p. 109).

Awe has implications across a wide range of disciplines and scholars from many fields have mused about its potential impacts. Sociologists have indicated that awe plays a role in determining social status and in communicating one's place in society in relation to others (Clark, 1990). Philosophers have indicated that awe may occur through engagement with literature and art or when viewing landscapes and that it may facilitate expanded thought and the opening of the mind. Educators describe the capacity of awe to facilitate passion for learning (Schneider, 2003) and to enliven students and teachers, motivating them to eagerly seek new knowledge (Elshayyal, 2007; Myers, 2007). Leisure scholars have frequently identified awe in adventure recreation settings and described it as a source of peace and strength (Fredrickson & Anderson, 1999; Heintzman, 2006).

### *Empirical Studies of Awe*

In spite of the conceptual nature of the majority of the awe literature, a small number of studies have explored awe empirically. In one such study, Saraglou et al. (2008) explored the relationship between awe and spirituality and hypothesized that immediately after experiencing awe people would be likely to have positive attitudes toward religion and spirituality. In this study, researchers purported to facilitate feelings of awe by having participants view videos that were designed to elicit awe, specifically videos of pristine natural spaces and childbirth. After watching the videos, subjects rated their emotional response to the videos indicating the intensity of their emotions and which emotions they felt. They then reported their personal religiosity and spirituality. Study findings supported the hypothesis in that those who viewed awe-inspiring images reported significantly higher levels of religiosity and spirituality than did controls who did not view the videos.

Psychologists have sought to provide empirical support for awe as a unique and distinguishable emotion. One way that psychologists define an emotion is in identifying a distinct facial expression that is associated with the emotion. Shiota, Campos, and Keltner (2003) studied the expression of awe and hypothesized that it would be expressed with a raised head and eyes, widened eyes and a slightly raised inner eyebrow. They found that the raised eyebrow and widened eyes were common in expressions of awe and also indicated that an open, slightly drop-jawed mouth was a common indicator of awe.

Shiota et al. (2007) further explored the experience of awe through a series of studies. First they asked a group of participants to describe how and when they felt awe.

Findings indicated that participants most frequently experienced awe in outdoor settings and that after reflecting on such experiences participants expressed a desire to return to nature. In a second study they found that awe tends to be associated with an external stimulus and that people who experienced awe felt small, connected to something greater than themselves, unaware of other concerns, connected to the world around them and felt desires for the experience to continue. In a different study Shiota et al. (2006) compared proneness to awe with the elements of the Big Five Personality Scale and indicated that people who are likely to feel awe tend to score high on the openness to experience and extroversion subscales of the Big Five Personality Scale. Oveis et al. (2009) described proneness to awe as an element of the more global measure of positive emotionality.

Philosophers and scholars from many disciplines agree that awe is an important concept with powerful implications for contributing to a happy and meaningful life. There is a broad recognition of the role nature plays in eliciting awe, although awe in the outdoors may only represent a part of this complex emotion. Certainly indicating that nature is a potential elicitor of awe does not capture the depth of the experience. What is it about nature that induces such feelings? What elements of the natural environment and the human experience in nature bring about this potentially meaningful emotion? One theoretical framework that can be used to explore such questions is recreation systems theory (More & Averill, 2003).

### *Recreation Systems Theory*

In an attempt to provide an integrative framework for the analysis of recreation behavior, More and Averill (2003) described what they called recreation systems theory.

They indicated that all recreation activities can be understood as systems of behaviors and, drawing on systems biology and general systems theory (Averill, 1992; Averill & More, 2000; Averill, Stanat & More, 1998), proposed three key characteristics of all recreation activities: functions, mechanisms, and capacities. Functions are described as the role a system plays within the larger system, mechanisms are those things that enable the function to be fulfilled, and capacities are system limits. In the context of a recreation activity, the functions are the purpose the activity serves in a person's life. The mechanisms are the things that enable the activity or that make it happen. The capacities are described as the characteristics, capabilities or skills a person must have to participate.

Much as concepts from systems biology and general systems theory guided More and Averill (2003) in clarifying the composition of various recreation activities, they can also be used to develop a deeper understanding of the composition of awe. The aim of the current study was to develop a deeper understanding of the experience of awe in outdoor recreation settings through describing the mechanisms that bring about the emotion.

## Methods

### *Design*

Because case study research allows both for exploration and explanation (Yin, 2003), a collective case study was employed to explore the mechanisms of nature induced awe. The case study approach allowed the researchers to gather information using various perspectives to develop an understanding of the mechanisms of awe in the outdoors (Stake, 2005). The instrumental nature of a collective case study allowed researchers to

explore, through the cases, the concept of awe, a construct which is external to the cases themselves. The use of multiple cases allowed the researchers to develop a more complete picture of awe in the outdoors than would have been provided by a single case.

### *Cases and Participants*

Theory based sampling was used to select the cases for this study. Previous scholars have indicated that individuals with higher levels of cognitive and psychological resources (Sundararajan, 2009), and people who are spiritually or religiously oriented (Ashley, 2006; Düzgün, 2004; Elshayyal, 2007; Halstead & Halstead, 2004) may be in a superior position to experience awe. The sample for the current study was composed of three cases that reflected those characteristics and from which individuals were actively engaged in outdoor recreation pursuits. The first case which is made up of an adult education hiking class in a local chapter of the Osher Lifelong Learning Institute (OLLI) was selected because members of this organization have a breadth of life experience and tend to be highly educated and continue to seek new knowledge. OLLI is “a membership organization whose mission is to provide opportunities for ‘seasoned adults’ to further their knowledge in both academic and recreational pursuits” (Osher, n.d.). The second case was a camping and backpacking course taught in the leisure skills program of a midsized land grant university in the southeastern United States. This case was selected because it consists of individuals from a different age group who are also seeking education and knowledge. The third case consisted of adult leaders of a Boy Scout troop that is housed within a religious organization in the Southeastern United States, as this group was expected to be spiritually oriented.

An initial sample of five participants was drawn from each case resulting in a total sample size of 15 participants. The researcher was prepared to conduct additional interviews had data saturation not been reached at the completion of the initial round of interviews. The OLLI participants included three females and two males who ranged in age from 64 to 70 years with an average age of 66. OLLI participants all had at least some college education and four of the five had a graduate or professional degree. The university students also consisted of three females and two males. These students were all single and between 19 and 21 years of age with an average age of 20. Finally, the Scoutmasters were all married, ranged in age from 25 to 47 years old with an average age of 34. One member of this group had some college education while the others had bachelor’s degrees. Each participant has been assigned a pseudonym to assure anonymity. Specific demographic information for each participant is provided in tables one through three.

Table 1. *Demographic information for case #1: OLLI backpacking class*

Pseudonym	Gender	Age	Race	Marital Status	Education	Income
Barbara	F	64	White	Married	Doctorate	\$50,000-74,999
David	M	65	White	Married	Grad/Prof	\$50,000-74,999
Jacob	M	67	White	Married	Grad/Prof	\$50,000-74,999
Sally	F	70	White	Widowed	Some college	\$100,000-149,999
Susan	F	66	White	Married	Grad/Prof	\$75,000-99,999

Table 2. *Demographic information for case #2: University hiking class*

Pseudonym	Gender	Age	Race	Marital Status	Education	Income
Craig	M	21	White	Single	Some college	\$35,000-49,999
Haley	F	20	White	Single	Some college	\$200,000+
Jennifer	F	20	White	Single	Some college	<\$25,000
Lisa	F	19	White	Single	Some college	\$25,000-34,999
Steve	M	20	White	Single	Some college	\$75,000-99,999

Table 3. *Demographic information for case #3: Scoutmasters*

Pseudonym	Gender	Age	Race	Marital Status	Education	Income
Adam	M	41	White	Married	BA/BS	\$200,000+
Jared	M	47	White	Married	Some college	\$75,000-99,999
Matt	M	30	White	Married	BA/BS	\$35,000-49,999
Mike	M	27	White	Married	BA/BS	\$50,000-74,999
Thomas	M	25	White	Married	Some college	<\$25,000

*Data Collection*

All participants were initially invited to take part in the study through a direct email invitation. OLLI participants received the email invitation from the OLLI office with which they are affiliated, university students received an invitation from their instructor, and Scoutmasters were invited directly by the researcher. Participants were informed that the study was being conducted to explore people’s experience of positive

emotions in the outdoors and that they were being invited to participate because they are involved in some form of outdoor recreation. They were informed that their participation would include taking part in an interview about their experiences in the outdoors and potential follow-up interviews as needed. The first five respondents from each case were initially selected for participation and additional respondents were informed that they would be contacted if more interviews were needed. Additional interviews would have been scheduled had data saturation not been reached during the initial interviews. Each interview was scheduled in a location and at a time that was selected by the participants.

Semi-structured interviews were conducted to gain an understanding of how participants interpret awe and what stimuli have contributed to experiences of awe in the outdoors. Through the interviews the researcher was able to gain deep and meaningful descriptions of how people experience awe, and what led to such experiences. Interview questions were strategically developed to examine the mechanisms of awe and were written with the assistance of a panel of experts in leisure and positive psychology. Participants were specifically asked to describe powerful experiences they had had in nature, and further prompted to identify if they felt awe in those experiences. When participants identified experiences of awe they were asked to describe specific elements of the experience that elicited that emotion, including, but not limited to, features of the environment, personal state of mind, and the presence or absence of other people. They were also asked if they believed experiences of awe could be created, and how they would go about facilitating such an experience for others. The semi-structured nature of

the interviews allowed the researcher to probe for deeper and more complex descriptions of experiences and mechanisms of awe when appropriate.

At one point in the interviews, participants were asked to complete the Multiple Affect Adjective Checklist-Revised (MAACL-R) (Zuckerman & Lubin, 1985) and a supplement to that form that was created based on previous conceptualizations of awe. Rather than use these forms in the data analysis, researchers used these checklists as a means of prompting consideration and discussion of relevant emotions that people experienced in the presence of awe. Interviews ranged from 44 and 83 minutes in length and lasted an average of 61 minutes. Interviews were conducted until data saturation was reached. Data saturation occurs when the researcher ceases to receive new information during additional interviews. If the same information is being reported repeatedly, and no new information is being gathered, then saturation has been reached (Seidman, 2006).

#### *Data Analysis*

Data were analyzed using inductive analysis and a constant comparative method (Denzin & Lincoln, 2000; Johnson & Christensen, 2004; LeCompte & Preissle, 1993; Ryan & Bernard, 2000). Johnson and Christensen describe this method as “immersion in the details and specifics of the data to discover important patterns, themes, and interrelationships” (p. 362) and indicate that it begins by exploring then confirming findings while being guided by analytical principles. A process of open coding was employed to identify relevant topics within the data, after which axial coding was used to structure emerging topics into main themes and sub-themes, which were then synthesized

into an overall theme (Strauss & Corbin, 1990). An external auditor reviewed relevant portions of the data and assisted in the formulation and revision of topics and themes.

### *Validity and Reliability*

Several steps were taken by the researcher to increase validity and reliability of the research methods used in the study. To ensure external validity the researcher followed the direction of Henderson (2006) by familiarizing himself with the literature surrounding the concept of awe as well as literature focusing on outdoor recreation. The researcher is also familiar with the types of settings scholars have associated with awe, including settings in which outdoor recreation takes place. This knowledge and understanding helped facilitate appropriate analysis of research data and proper conclusions regarding findings and generalizability. To increase internal validity, the researcher used guiding research questions, kept an audit trail, and engaged in a process of personal reflexivity (Henderson) all of which served to increase the credibility of the research by protecting the study from researcher bias. The face validity of the analysis was strengthened through the use of member checks, a process through which research findings were shared with study participants to verify that their experience is reflected in the findings (Wyman, 1985) and with the support of an external (Guba & Lincoln, 1981).

To increase reliability of the study, a research plan was carefully followed throughout the study (Henderson, 2006). The researcher was flexible and adjusted the research plan as necessary, documenting all changes in the audit trail. Both Henderson and Guba and Lincoln (1981) indicated that the use of an external auditor serves to support reliability as well.

## Results

The following overall theme emerged from the data: various environmental, individual, and social factors contribute to experiences of awe in the outdoors. Three main themes contributed to the development of this overall theme. These were: (1) awe in the outdoors may be facilitated by things one sees; (2) awe in the outdoors may be facilitated by things one does; and (3) awe in the outdoors is influenced by individual characteristics. Each of these main themes consisted of multiple sub themes that provide further description of the theme. Themes and subthemes are listed in Table 4 and will be described below.

Table 4. *Themes and sub-themes describing mechanisms of awe*

Main themes	Sub-themes
I. Awe in the outdoors may be facilitated by things one sees	<ul style="list-style-type: none"> <li>a. Natural phenomena (e.g. acts of God, sunrises/sunsets, geographic elements)</li> <li>b. Characteristics of the environment (e.g. beauty, vastness, simplicity)</li> <li>c. Accomplishments of others (e.g. cliff-dwellings)</li> <li>d. The unexpected (e.g. exceeding expectations, the element of surprise)</li> <li>e. Genuine experience (i.e. not what's on TV, pure interactions with nature)</li> </ul>
II. Awe in the outdoors may be facilitated by things one does	<ul style="list-style-type: none"> <li>a. Personal Investment (e.g. summiting the mountain)</li> <li>b. Getting out (e.g. leaving distractions behind, going into the wilderness)</li> <li>c. Frame of mind (e.g. Personal awareness, letting down your defenses)</li> </ul>
III. Awe in the outdoors is influenced by individual characteristics	<ul style="list-style-type: none"> <li>a. Openness (e.g. varying thresholds for awe)</li> <li>b. Social orientation (e.g. presence of others influences experience)</li> <li>c. Personal interests (e.g. curiosity)</li> <li>d. Spirituality/Faith (e.g. explanation of events)</li> </ul>

*Awe in the Outdoors May Be Facilitated by Things One Sees*

Data indicated that the things participants observed during various encounters with nature facilitated strong responses that they described as “awe-inspiring,” being “awestruck,” or being “in awe.” Participants described their visual experiences of (a) natural phenomena, (b) characteristics of the environment, (c) the accomplishments of others (d) unexpected encounters, and (e) genuine interactions with nature as bringing about feelings of awe. Each of these sub themes is described below.

*Natural phenomena.* Natural phenomena were frequently identified as awe-inspiring events. Some of the natural phenomena that were described by participants included acts of God (e.g. storms and volcanoes), sunrises and sunsets, and geographic elements like mountains, valleys, oceans, and forests. For example, Jacob described a visit to the site of a volcano shortly after a massive eruption.

I drove down from Seattle one night after the Mt. St. Helens, thinking it was no big deal to get down there and go see it. I went down there in a rental car it was about dark and all the roads were marked do not enter and closed and stuff and I went right on through and clear over to the opposite side the hill opposite to where the thing blew out. That was awesome, I’ve never seen anything like that I just couldn’t believe, I mean you just can’t imagine what that looked like. The dust was a foot thick up there and that was awesome.

Some of the participants identified the interplay between geographic elements such as ocean beaches or the Grand Canyon and the rising and setting of the sun. Barbara stated,

Standing out on a beach, and you are looking out beyond as the sun either rises or sets it is an awesome experience and what you see is again, power to me.

Awesome, that sun comes up and sets every day.

Another participant, Susan, described the experience of a sunset at the Grand Canyon. She said, “To be there at sunset and just to look out at the sky and the sunset...to me that was awesome, not the awesome that’s popped around as the word these days but truly awesome.”

*Characteristics of the environment.* Many participants talked about specific characteristics of these places that contributed to feelings of awe. The types of places that were consistently identified with awe were places of beauty, vastness, simplicity, peace and quiet. Adam identified such experiences, stating, “Sometimes when you climb a mountain and you look around and see the view, it’s awe, the vastness, the beauty how grand things are.” Similarly, Jennifer described a hike she had taken to “the top of a knoll” and stated

You can look out and see for miles when there’s no clouds and it’s just so beautiful and awe-inspiring kind of thing. It just makes me think how, I don’t know, just how beautiful Gods creation is and how he’s like formed and made these things and how I can’t do anything like that.

David described the vastness but also the quiet and peace of awe in the outdoors when he said “In the Desert Southwest when you got away from everything it was so quiet and you could just see forever.”

Craig described a recent backpacking trip and the awe he experienced from the simplicity and beauty of the area.

It was nice, peaceful, quiet, a get away from civilization. It was a good time. I would probably have to say just the way the landscape was set, the way certain trees had fallen, lots of obstacles to climb up and go under. It's just amazing how things fall, how things lay, how things cross up and how a two ton tree can come crashing down and take everything with it.

Similarly, Haley described awe as

Just like really appreciating it. And just like how simple just how great simple things are and just like beauty of it, like breathtaking I guess. Just simple. Like the mountains or the ocean, something not manmade. Just like how it was, just untouched beaches, you know.

*Accomplishments of others.* Some of the participants described the accomplishments of others, the ability of those who have gone before to negotiate the challenges posed by the natural environment, as things that have been awe-inspiring.

Barbara described,

An awesome thing is when you go to the Navajo cliff dwellers and they built homes in the cliffs but where's the ladders? I mean, we think we know what they did with the ladders; they took them up and down but the thought of doing it, we are awestruck at their capabilities.

She also stated,

Even when we were hiking in the Appalachian and come across an old home that's gone now with a grist mill or something but you can be awestruck at how they put it all together and the beauty that was there, still is.

*The unexpected.* Research participants frequently described the unexpected nature of awe-inspiring events. They described the rare experiences and those that were unique or special in some way. Lisa, for example, described an early morning when she drove over a misty lake at sunrise. She said, "It was really pretty. It was the fact that we were the only people up at that time we were the only people that got to see it." Participants also recollected times when they experienced awe because their expectations of an experience were exceeded or they were stunned or surprised by some element of the experience. In describing the view from a mountain top, Steve said, "you know what you are going up to see up there, but you don't know how grand or what you are really going to see so it just hits you." Others described the changing and evolving nature of the environment and described that day-to-day changes in a place or changes that happen over time may facilitate feelings of awe. Thomas described how subtle differences in each sunrise allow for continued experiences of awe.

For example the sunrise; you've got a clear day I guess the sunrise is just probably about the same. You put in a mixture, maybe like some clouds or the sun breaking through the clouds and I guess different variations in that kind of make it different. So I guess something that's unique is different. It stands out from the rest.

*Genuine experience.* Participants also described the importance of pure or genuine experiences in facilitating awe. Craig described a moment when he was out duck hunting at twilight and a skein of geese flew immediately over him. He said of this experience,

It was kind of one of those breathtaking moments if you will. You were kind of like, ‘wow’. It’s nothing you are going to see on TV. It’s just one of those things that you have to be there to experience it.

Jacob expressed a similar sentiment when he said,

On that Alaska trip we had one night where we were on a paddle boat up the coast and that is sort of unique in itself, but one night we were sitting in this paddle boat at the dinner table along the windows and we were sitting there watching the whales feed right outside while we were eating dinner. That was awesome. You see it on TV but to watch that sort of thing. TV has sort of spoiled things as far as nature goes.

Jared provided a possible explanation for the spoiling that Jacob described. He said,

I think [people] get wrapped up in the world and I think that people think of what the world thinks they should concentrate on instead of what the feelings should make them concentrate on. They feel like they need to be told what they need to be looking at. And they’re so focused on the media and they feel like they are being told what to do. They are into texting, TV, radio, so they are told what to feel instead of feeling what comes.

*Awe in the Outdoors May Be Facilitated by Things One Does*

In addition to things a person might see that bring about or facilitate feelings of awe, a person can also do a number of things to make such experiences more likely or more poignant. These things include (a) making a personal investment, (b) going out to have experiences, which includes leaving behind distractions and (c) being in a frame of mind that will allow one to experience awe. Each of these will be described below in more detail.

*Personal investment.* Participants described many occasions in which their own personal investment in an activity contributed to the experience of awe. They described times in which they exerted significant effort to reach the top of a mountain, or when they had extraordinary success on a hunting or fishing excursion. Sometimes the successes were attributed to luck, other times to the efforts of the participant. When participants had success in an activity that they perceived as having required their own efforts, they often described feeling awe. Sally, for example described one such experience:

It was very strenuous and I feel like physically I had extended myself to participate in that. It [the feeling of awe] was a reward. You have to have something to look forward to at the end of the hike.

Participants also described how their own work with the natural environment has led to feelings of awe. Sally described her work in her garden as allowing for some such experiences. Similarly, Thomas described his work on a golf course as follows:

Sometimes in the spring time the course looks perfect, and you know everything has been mowed; it looks like a perfect day. It doesn't happen often but when it

happens it feels like you've done your job to satisfaction... I guess like a moment of awe. Yeah, it's almost like a combination of like nature and something I did with nature.

Another important part of a personal contribution to experiences of awe comes in how one thinks about an experience. Many of the participants talked about learning from experiences of awe and how learning about something makes it more awe-inspiring. Many talked about how the learning process of experiencing a new thing and learning about it enhances the experience and may facilitate feelings of awe. Jacob said, "I feel privileged to be able to experience something that I haven't experienced before. That is awesome to me and to learn something new." Mike, Steve and Craig each described how going into the outdoors with their fathers and grandfathers and others who are knowledgeable and willing to teach them facilitates feelings of awe, because they are able to understand things they had not previously understood.

*Get out there.* Several participants stated that the best way to experience awe is to go out into nature and to be in places where awe occurs. Mike described awe as something that "happens regardless of you, but," he said, "you can choose to go where it is likely to happen." Similarly, Barbara described a time when she realized the importance of getting herself and her children into the outdoors so that they could have positive experiences including experiences of awe.

I took my boys once to go pick strawberries and I made a little smart remark to them that I needed to be home cleaning house, and a lady, a grandmother probably my age now, and she turned to me and said 'honey remember this

moment in time because they won't have it again with you. That dust will always be in your house' and that's probably when I started paying attention. She was right. If you are going to teach them that moment is going to be gone so get out and start teaching them about the outside world and not cleaning house. So I had to change my focus. Housekeeping can wait.

Barbara indicated that she and her children would not have experienced awe as they did throughout their lives had her mindset not been changed through this interaction in the berry patch.

Others indicated that going where awe is likely to happen is more than just physically going out. Being aware of the world around contributes to such experiences as well. Thomas indicated that he needed to be both outside and aware of his surroundings in order to experience awe.

I think part of it is [moments of awe in the outdoors] kind of happen as well as, well it happens. I guess my part is just being there and being aware of what's going on and noticing the differences between what's going on. So I guess just being aware of the differences.

*State of mind.* Sometimes people need to make a conscious effort to disconnect from the distractions of everyday life to facilitate awe. Susan described how the responsibilities and stresses of everyday life can get in the way of feeling awe. She expressed worry about the current generation, stating,

We have got to go out and get away. Leave that cell phone in the car. I really think that so many people don't have a clue and have never experienced [awe in

the outdoors] and what it can do for you. My big concern is the younger generation, my grandchildren. Everything is like this and I think what is going to happen to you and I know that we need time to let our mind rest. We got to clear things out and we've got to turn things off and not constantly be bombarded. You've got to think and I don't see them doing that or even learning that you can sit out somewhere by the stream and let your thoughts take you wherever. We need that.

Other participants described how nature allows them to relax and to decompress, which then allows them to truly be in nature. Jared stated,

Yeah, I think you have to release from your day to day life to experience those types of things. I don't think they happen in the first few minutes in nature, or they're not as great. I think two people can have the same experience and the person that's been out there for 3 days will have a bigger experience rather than the person that got there that today. I think it takes a while for you to release your stress and emotions from everyday life before you do.

Haley described this as well when she said that nature makes her feel,

Not really stressed, you can kind of temporarily forget about everyday things when you are out there because there is nothing you can do about them when you are out there anyway so there is no sense in worrying for the time being anyway.

### *III. Awe in the Outdoors is Influenced by Individual Characteristics*

The data emphasized the individual nature of awe. Different people reported experiencing awe in different ways and in different places depending on a number of

individual characteristics. There is no single landscape, no matter how beautiful or how vast, that universally induces awe. Participants indicated that (1) different people may have different thresholds for awe, (2) personal interests influence how one experiences awe, (3) one's social orientation may influence the types of situations in which one may experience awe, and (4) spirituality may have an impact on how one perceives potentially awe-inspiring events.

*Openness.* A number of participants indicated that some people may be more prone to awe than others or that different people may have a higher or lower threshold for experiencing awe. Jared summarized the thoughts of many participants when he described that some people don't experience awe because they aren't open to the experience. He described, "I think people in the mountains... some people, it depends on the individual, some people would always remember that, wow, look at these awe inspiring moments. I think it's always awe inspiring." He went on to say,

Some people's awe is a lower threshold than others, I think mine is lower. My name is Jimmy I'll take what you gimme, you know? And my awe is just whatever I am supposed to learn today. Sometimes it's up; sometimes it's not as great. But you always experience something, always learn something new.

*Social orientation.* While many of the participants indicated that sharing the awe-inspiring experience with others enhanced the feeling others indicated that the presence of others tends to distract or detract from the experience. Adam said, "I do think there is a social aspect, something you can talk about. Something you can...share. Yeah, sharing makes it more meaningful." Similarly, Susan said,

Well I think It's sharing, I think that's a big part of it, is sharing your thoughts as opposed to being alone I think that's important doing things in groups or with people because you can share it and they can share their thoughts with you and maybe make you aware of something you might have missed had you been alone, so its listening also. You get a lot that way.

Other participants described that these experiences always occur with others because they are not likely to venture into the wilderness on their own for safety reasons. On the contrary, some of the participants indicated that having other people present is likely to detract from the experience of awe or inhibit the likelihood of an awe-inspiring experience. These descriptions tended to center around the likelihood of other people disturbing the moment and distracting from the experience.

*Personal interests.* Participants also indicated that personal interests play an important role in how they experience awe. Mike described awe as occurring more frequently when he is experiencing something that draws his interest or that he is curious about. He described his own interest in watching animals in the wild and indicated that his interest in and curiosity about their behaviors is what drives his awe. In describing the mindset that allows him to experience awe, he said,

Curiosity and interest I think those are the two. Curious to see what they will do, are they going to do this or the snake, is it going to snap or eat something? So curiosity of what they are going to do and interest in that.

Other participants described that people who frequently choose to spend time in the outdoors are more likely to experience awe in the outdoors, not only because they have

more interaction with nature, but also because their relationship with nature may enhance their knowledge of and interest in nature.

Susan described the importance of curiosity and indicated that little things draw her interest as well as large, and that both large and small things facilitate feelings of awe. She described an experience, stating,

We stopped just by this little stream that was running over the rocks and just sat down to rest but the yellow leaves had all fallen, now that was not the Grand Canyon by a long shot but just sitting there and just looking at all these beautiful little yellow leaves in the water and just sitting there it was awesome, that was all. I think that just sitting there looking at the beauty of the color of the leaves and hearing the trickle of the water, to me, there again it was just taking in the beauty and storing that memory so that here months later I can see it.

*Spirituality.* Many of the participants indicated that their own spirituality has an impact on how likely they are to experience and to recognize awe. This was described in the sense that one's spirituality opens one up or makes one prone to feelings of awe. Craig indicated that when he experiences awe in the outdoors he often thinks to himself, "Look what The Good Lord gave us!" Sally described experiences of awe and indicated a spiritual connection to those moments. When asked about the directionality of this connection, that is, does spirituality make one more likely to experience awe or do experiences of awe enhance spirituality, she stated, "I think it's the first. Being a spiritual person gives me the feeling of awe more than the other way around." Similarly, Susan described her encounter with the Grand Canyon and indicated that

It was very overpowering to look at it first of all as a science teacher and ‘oh gee here are all those rock layers and here is all of that history’ but then the spiritual aspect.... And to think ‘God created all of this.’ Over all of these millions of years, all of these forces of nature had created this spectacular place. It’s just being there and I think of the hymn *How Great Thou Art*. What is the second verse? When I look down from rocky mountain grandeur? That’s it.

### Discussion

Keltner and Haidt (2003) described the “the mystery of [awe’s] mechanisms” and called for further exploration of those things that induce feelings of awe. The current study provides some insight into the mechanisms of awe in the outdoors. As empirical research has been largely absent in previous writings on awe (Keltner and Haidt), the findings of the current study begin to fill a previously existing gap in the literature. Findings support much of what has been written in the theoretical and conceptual literature while raising new questions to be addressed in future research.

#### *Discussion of Findings*

*Vastness.* Participants in the current study provided further insight into the concept of vastness that researchers have previously identified as a key feature of awe, partially “form[ing] the heart” (Keltner & Haidt, 2003, p. 303) of experiences of awe. Vastness, as described in the existing literature, is largely limited to things that are of great size, such as oceans, vistas, and giant redwoods. Participants in the current study agreed that a perception of vastness was common in experiences of awe in the outdoors, but supported Heschel’s (1955) statement that elicitors of awe can be found even in a

grain of sand. Participants reported experiencing vastness in a broad range of stimuli. Awe was identified, for example, in the process of a tiny seed developing into a flower, in the hummingbirds that visit them outside their kitchen windows, and at the ant working to get around an obstacle in its path. Perceptual vastness is awe-inspiring in much the same way as the vastness that is experienced when one encounters the physical grandeur of the Grand Canyon, for example.

*Accommodation.* Keltner and Haidt (2003) described a need for accommodation as a key element in the experience of awe and indicated that “natural objects that transcend one’s previous knowledge are more likely to produce awe than familiar ones” (p. 310). While many of the research participants recalled experiences of awe that occurred the first time they stood at the rim of the Grand Canyon or some other beautiful vista, many others described experiences in their back yards, on nearby trails, and along familiar streams where they were struck by something they had seen dozens of times before. These people indicated that, for them, awe is as likely to occur in familiar places as it is in unfamiliar places or toward unfamiliar stimuli that may require the process of accommodation.

*Refined awe.* As stated above in the review of the literature, Sundararajan (2009) described a refined awe that is somewhat different from the prototypical awe. Whereas the prototypical awe, what Sundararajan calls a coarse emotion, is rather automatic in that it occurs without significant cognitive investment in the experience, refined emotions include a level of self-reflexivity and detachment. A person who encounters an experience in a self-reflexive way has an inward focus that leads one to explore the

meaning of the experience or one's personal relationship to it. Detachment allows a person to reflect on an experience versus being completely engulfed in the experience. While many of the research participants described experiences in which the awe-inspiring stimulus left them speechless or even dumbfounded, most also described experiences in which their awe was based in a reflexive exploration of the event and a consideration of their own role or place in relation to the stimulus. Many described experiences in which thoughtful consideration of the awe-inspiring stimulus enhanced the emotion and created a longer lasting or more powerful experience of awe.

Sundararajan (2009) indicated that refined awe is likely to be experienced more frequently by those who possess a higher degree of cognitive and affective resources. Considering that the research participants were, on the whole, educated and of a relatively high socio-economic status, it may be that they have more cognitive and affective resources than the average person. This may account, at least in part, for the frequently reported experiences of refined awe. It is important to recognize, nonetheless, that the majority of participants indicated that their experiences of awe frequently include a thoughtful consideration of their encounters with nature that may be beyond the prototypical experience of awe described by Keltner and Haidt (2003). Future research will be needed to further explore the difference between refined awe and the prototypical awe described by Keltner and Haidt (2003).

*Attention restoration theory.* Beyond identifying awe as a component of some people's recreation experiences, leisure scholars have not directly explored the concept of awe. There are, however, some elements of leisure frameworks that are similar to the

experiences of awe described in the findings of this study. One such framework is attention restoration theory (Kaplan, 1995) which describes the process of attentional fatigue that occurs through everyday life and results in a diminished ability to concentrate and to navigate daily responsibilities. Kaplan suggests that fatigued attention can be restored through experiences that are sufficiently different from one's ordinary routine so as to allow the mind to rest. Restorative activities, according to Kaplan, must also be compatible with the purpose of being away and must naturally draw one's attention without requiring an exertion of personal effort. The findings of the current study indicate that awe in the outdoors may indeed share some characteristics with other restorative experiences; in fact, awe in the outdoors may represent a subset of highly restorative experiences that should be explored through future research.

### *Implications*

Findings from the current study provide useful information for leisure scholars and practitioners. Leisure and recreation play an important role in facilitating quality of life (WHOQOL, 1997). Because of this, recreation scholars may share a common goal with positive psychologists, who claim as their primary task the development of "an understanding of what makes life worth living" (Seligman & Csikszentmihalyi, 2000, p. 13). The current study represents a step in leisure research toward embracing and using concepts from the field of positive psychology. It is a beginning step in understanding how constructs such as awe, and other important emotions that are explored by positive psychologists, can help to better address issues related to quality of life through leisure.

This study specifically provides information about the mechanisms of awe which may help practitioners to better understand how they may facilitate opportunities for people to experience this potentially powerful and beneficial emotion. While study participants indicated that awe cannot be created in the sense that it can be forced upon a person, there are certain types of experiences that may be more likely to induce awe. For example, understanding that sunrises or sunsets as viewed from a beautiful vista may be more likely to facilitate awe than watching a sunrise on a television set or a computer screen, a practitioner could provide programming that allows or even encourages people to participate in the former rather than the latter experience. Building an unexpected element into the experience may also make awe more likely to occur. Many parks do this very thing, where trails are designed to lead to unique or striking views or features without giving away the destination before you get there.

There are also steps that recreationists can take on their own to increase the chances of experiencing awe. Participants in the current study reported experiencing awe more frequently when they had made some sort of investment in an activity, such as summiting a mountain, planting a garden, or gaining some kind of new knowledge. The first step that an individual can take to facilitate awe in the outdoors is to go out into nature. While the primary responsibility for this step lies on the individual, practitioners can certainly provide programs that offer opportunities for the kind of personal investment described in the current study. It may also be important to publicize information about the availability and benefits of such programs to encourage people to participate. Practitioners should recognize that while these steps may contribute to an

increased likelihood of awe in the outdoors, the actual experience of awe is dependent on a number of additional factors that are beyond their control. Providing opportunities and encouraging participants to do those things that will help them to experience awe in the outdoors is, however, a first step in facilitating such experiences.

### *Limitations and Future Research*

While a parsimonious definition of awe has not been broadly adopted in the research literature, a number of characteristics of awe have been identified by various theorists and scholars who have also recognized awe's potential for contributing to an increased quality of life. The current study was built on existing scholarly writings about awe, but more work is needed to develop a fuller understanding of this emotion. By offering an increased understanding of the mechanisms of awe in the outdoors this study begins to contribute to what may become a commonly accepted and parsimonious definition of awe. It is, however, important to consider the limitations of the current study and to consider appropriate future steps in developing an understanding of awe.

While a theoretical sampling method was used to gather a broad range of research participants who were likely to have experienced awe in the outdoors, the resulting sample, although diverse in age and experience, was fairly homogenous in terms of race and socioeconomic status. In future research it will be important to collect data from more diverse samples as this will allow for a broader understanding of awe.

More and Averill's (2003) recreation systems theory (RST) provides a framework for understanding recreation activities. RST describes three characteristics of such activities: mechanisms are those things which enable the activity to occur, functions

are the purpose an activity plays for a person, and capacities are the capabilities or characteristics a person must have to participate in the activity. The current study borrows from RST to understand the mechanisms of awe, those things that enable awe to occur. The academic understanding of awe would be greatly enhanced by a broader exploration of awe's functions and capacities. Future research in this area would offer a significant contribution to leisure scholars as well as psychologists and others.

Finally, the current study employed qualitative methods in order to gain a rich and deep understanding of people's experience of awe. As a more complete picture of this emotion is developed and as scholars work toward a commonly accepted definition of awe, it will be important to apply quantitative methods to the exploration of awe. Quantitative studies should include the development of a scale to measure awe and to further explore the details of this emotion. Keltner and Haidt (2003) stated that "the potential power of awe, combined with the mystery of its mechanisms, may itself be a source of awe, giving pleasure both to those who study it and to those who cultivate it in their lives" (p. 312). The current study is a first step in shedding light on the mechanisms of awe, specifically awe in the outdoors. Scholars, practitioners, and recreationists will benefit from the continued study of this emotion as more is discovered about awe, its role in recreation, and its potential contribution to quality of life.

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## CHAPTER SIX

### CONCLUSION

The findings of the current study add to the existing understanding of awe in two significant ways. First, the study verifies that awe exists on a practical, experiential level, and not merely as a philosophical concept to be discussed among academics. All of the participants in this study were able to identify moments when they had experienced awe in the outdoors and recalled those moments vividly enough to describe specific details of the experience. These experiences were described by all participants as positive and meaningful experiences. Second, the study provides empirical support for many of the existing conceptual and theoretical descriptions of awe found in the literature (e.g. Halstead & Halstead, 2004; Keltner & Haidt, 2003; Sundararajan, 2009). Specifically, findings clarify claims that have been made about the benefits of awe and its elicitors, or as described in this dissertation, the functions and mechanisms of awe.

#### *Theoretical Contributions*

Two different theoretical frameworks were described in chapter one, each of which has proven useful in developing an understanding of awe. The broaden and build theory of positive emotions (Fredrickson, 1998) offered a description of the role positive emotions play in enhancing quality of life by opening one's eyes to available possibilities and by providing one with lasting resources to draw upon in the future. Findings from this study provide further evidence for the broadening and building nature of positive emotions, specifically recognizing the means through which awe broadens and builds.

Findings from the current study also indicate that awe may be particularly relevant to those who are interested in the restorative value of outdoor recreation. Kaplan's attention restoration theory (1995) posits that fascinating encounters that are sufficiently removed from one's daily life experience have a restorative effect in that they serve to recharge one's ability to focus and to perform daily responsibilities. Participants' descriptions of their experiences of awe and the functions of awe that they identified supported the tenets of attention restoration theory. Future research exploring the role of awe in the restorative process and the possible connections between the fascination and extent aspects of restorative environments will add to the existing understanding of awe and also serve to increase scholars' understanding of restorative experiences.

#### *Awe and the Human-Nature Connection*

With his bestselling book, *Last Child in the Woods*, Louv (2005) effectively communicated the value of experiences in nature to a mass audience and issued a potent warning about the possible consequences of the human-nature disconnect that has occurred in recent years. Since Louv brought this issue, which he has called Nature-Deficit Disorder, to a national stage significant efforts have been made to develop the human relationship with nature. A recent volume of *Leisure Sciences* (Henderson & Bialeschki, 2010) focused on the human-nature connection and emphasized the important value of exposure to nature. Lawmakers have explored ways to bring people into nature with bills like the *No Child Left Inside Act of 2009* (H.R. 2054, 2009; S. 866, 2009). Findings from the current study indicate that experiences of awe in the outdoors bond people to the outdoors and strengthen their desire to return. Providing opportunities for

people to experience awe in the outdoors may, for some, be exactly what is required to motivate them to continue to engage in outdoor activities.

### *A New Autotelic Experience?*

The benefits described above and in the functions section of this dissertation (chapter 4) make a strong case for the value of awe. It may be important for researchers to recognize, however, that awe has value in itself, providing a new kind of autotelic experience. Csikszentmihalyi (1990) described flow as an autotelic experience, one that is rewarding in itself rather than by facilitating extrinsic rewards. Emphasizing the unique functions of awe and the benefits it offers those who experience it may, in fact, distract researchers from recognizing the innate value of awe—the experience itself. Future research exploring the autotelic nature of awe would offer important new knowledge for those who seek to understand awe and quality of life.

### *Defining Awe*

A variety of factors may contribute to the failure of the academic community to develop a broadly accepted definition of awe. Walter (2004) offered one possible explanation, stating that “The object of awe is easier to describe than the experience” (p. 481). This is seen in both Keltner and Haidt’s (2003) and Halstead and Halstead’s (2004) description of awe as a response to stimuli that are vast, powerful, or splendid (describing the object, not the emotion). It may also be the case, as Keltner and Haidt (2003) suggested, that awe is a family of emotions that cannot be dealt with in a single definition. The lack of parsimony in previous attempts at defining awe may also point to

the complexity of the emotion, indicating that a parsimonious definition for awe may not be possible.

Although there are indications that emotions are difficult to define (Wierzbicka, 1992) controversy as to whether specific emotions can be defined Ortony, Clore and Foss (1987) indicate that the difficulty of the task in no way means that emotions cannot or should not be defined. Wierzbicka indicated that the development of a definition of emotions may take place across decades and through many iterations of a definition. This process allows researchers to more fully explore the concept and to investigate the potential components in order to develop a definition that is useful and complete. Awe is one emotion that has remained undefined.

Findings from the current study do, however, offer further insight into what has been suggested in previous research and offer some new ideas to consider in the development of a definition of awe. Participants frequently described awe-inspiring stimuli as vast (Halstead & Halstead, 2004; Keltner & Haidt, 2003), a factor that was experienced conceptually as well as in response to physical vastness. Most participants described the beauty and power of awe-inspiring stimuli, both components that scholars have previously identified with awe (Halstead & Halstead; Keltner & Haidt). While Keltner and Haidt suggested that awe is likely to be stimulated by “objects that transcend one’s previous knowledge” (p. 310) and stimulate a process of psychological accommodation, findings from the current study indicate that accommodation is often absent from experiences of awe, calling this description into question. Sundararajan’s (2009) description of refined awe, in which awe is facilitated through a certain cognitive

engagement with the experience, was frequently described by the research participants who indicated that learning and thoughtfully considering the experience was likely to result in feelings of awe. Data from the current study also raised questions about the presence of fear in experiences of awe that was described by Heschel (1955), Keltner and Haidt, and Halstead and Halstead. Only three of the fifteen study participants associated fear related emotions (afraid, fearful, frightened, or terrified) listed on the MAACL-R (Zuckerman & Lubin, 1985) with experiences of awe. Those who did not identify any of these emotions were asked specifically about the role of fear in experiences of awe and the majority of these people indicated that fear and awe cannot coexist.

While a final and complete definition of awe cannot be offered at this point because the historical context that Wierzbicka (1992) indicated was necessary does not exist, the current literature, coupled with the data from the current study do provide a jumping off point for a new iteration of a definition of awe. First, this study provides evidence for the existence of awe as a unique and meaningful emotion and offers further insight into the composition of this emotion. The data also indicate some specific and identifiable elicitors of awe, including stimuli that beautiful, vast, or powerful such as those that may be viewed during a lightning storm or when standing on a mountain top. Data also identify intrinsic factors that impact the experience of awe, indicating that certain people may be more prone to experience awe than others. The functions of awe described in the current study also offer insight into the composition of the emotion.

Based on the existing literature and the data from the current study, the following working definition has been developed for awe that is experienced in outdoor recreation.

This type of awe is an emotional response to that which is perceived as vast or powerful in the outside world. Awe-inducing stimuli often possess great beauty and experiences of awe are marked by increased motivation to engage with the world and to contemplate life and existence. Awe often provides an escape from everyday life and enhances human relationships with each other and with the surrounding world. Such experiences also create new knowledge and facilitate lasting memories.

### *Future Directions*

Beyond the further development of a definition of awe there are a few other important directions that future research should take. The research questions for the current study were developed from an understanding of recreation systems theory (RST) (More & Averill, 2003). This theory describes three characteristics common to all recreation activities: the functions of an activity (the consequences it brings about), the mechanisms of an activity (that which enables the activity to happen), and the capacities of an activity (the abilities a person must possess to successfully engage in the activity). While this theory is designed to assist in analyzing recreation activities, it has also proven useful in exploring awe. While the current study explored the functions and mechanisms of awe, study participants also indicated that individuals may be more or less likely to experience awe. This finding may be explored further through a careful examination of the capacities of awe. Specifically, do developmental stage, activity specialization, past experience with and knowledge of the eliciting stimulus, age, intelligence or other personal factors impact the likelihood of awe? Future studies may also consider different types of elicitors, including, but not limited to awe in places of historical significance

(e.g. battlefields), and awe in exceptional sensory experiences including the appreciate of exceptional music, fine art, and even extraordinary food. An exploration of potential cultural differences in the experience of awe may also provide important insight and knowledge that will add to the current understanding of awe. The current study also found that awe in outdoors also serves to draw people back to nature. This finding has implications for the role of awe in facilitating place attachment and this relationship should be explored in future studies.

Finally, the current study sought to develop a more complete, empirically based understanding of the functions and mechanisms of awe than what is provided in the existing literature. Qualitative methods proved useful in gathering rich data to answer these questions. As scholars continue to develop an understanding of awe and work toward a useful definition, it will be necessary to employ quantitative methods to the exploration of awe. Quantitative work must include the creation of a scale to measure awe and to further explore the workings of this emotion. As Keltner and Haidt (2003) indicated, “the potential power of awe, combined with the mystery of its mechanisms, may itself be a source of awe, giving pleasure both to those who study it and to those who cultivate it in their lives” (p. 312).

## APPENDICES

## Appendix A

### Semi-structured Interview Questions

1. Ice-breakers
  - a. Tell me about yourself
    - i. Family situation
    - ii. Life stage
    - iii. Interests
  - b. Tell me about your experience in the outdoors.
    - i. What do you like to do?
    - ii. How often do you engage in outdoor activities?
    - iii. How long have you been doing so?
2. Tell me about an experience you've had that "blew your mind."
3. If they mention awe, ask
  - a. What does the word awe mean to you?
4. If they don't mention awe, ask
  - a. Would you say that the experience you described was one of awe?
  - b. What does that word (awe) actually mean to you?
5. Could you tell me about a time (other times) in your life when you experienced awe?
  - a. Preparation
    - i. Had you done anything to bring about this experience?
    - ii. Were you in a particular state of mind?
    - iii. Were you seeking an awe inspiring event?
  - b. Elicitors
    - i. What was it about the experience that was awe inspiring to you?
  - c. Feelings
    - i. What emotions did you feel when that happened?
  - d. Was there anyone there with you or were you alone?
    - i. Who was there?
    - ii. Do you believe that this impacted your experience in any way?

[If the participant does not describe experiences of awe in the outdoors the researcher will ask the following question]

  - Have you ever experienced awe in nature?
6. Do you believe that this experience had an impact on you? (what impacts?)
  - a. Immediate impact?
  - b. Short term impact?
  - c. Long term impact?

[Questions 5 and 6 may be repeated multiple times as the person continues to share experiences of awe]
7. Do you believe that such experiences can be created?
  - a. How?
8. Was there an element of fear associated with these experiences?

9. When you feel awe does it tend to be the first time you are exposed to something, or have you often been there before?

Appendix B

Demographic Form

*Please answer a few questions about yourself that will help us better understand our participants. Remember, all of your answers will be kept completely confidential.*

Gender:            \_\_\_ Female    \_\_\_ Male

Age:            \_\_\_\_\_

Race:            \_\_\_ White not Hispanic            \_\_\_ Asian  
                     \_\_\_ Black not Hispanic            \_\_\_ Pacific Islander  
                     \_\_\_ Hispanic            \_\_\_ Native American  
                     \_\_\_ Other: \_\_\_\_\_

Marital status—Check all that apply to you currently:

- \_\_\_ Single—Never married
- \_\_\_ Married—If yes, how many years to current spouse?
- \_\_\_ Unmarried—Living with partner
- \_\_\_ Separated—If yes, how long have you been separated?
- \_\_\_ Divorced—If yes, how long have you been divorced?
- \_\_\_ Widowed—If yes, how long have you been widowed?
- \_\_\_ Other: \_\_\_\_\_

Your education level:

- |  |   |
|--|---|
| <input type="checkbox"/> Less than high school     | <input type="checkbox"/> BA/BS                        |
| <input type="checkbox"/> High school graduate/GED  | <input type="checkbox"/> Graduate/Professional degree |
| <input type="checkbox"/> Some college              | <input type="checkbox"/> Doctorate                    |
| <input type="checkbox"/> Associate (2 year) degree |   |

Annual household income:

Please indicate the estimated annual income for your family.

- |   |   |
|---|---|
| <input type="checkbox"/> Less than \$24,999   | <input type="checkbox"/> \$75,000 to \$99,999   |
| <input type="checkbox"/> \$25,000 to \$34,999 | <input type="checkbox"/> \$100,000 to \$149,999 |
| <input type="checkbox"/> \$35,000 to \$49,999 | <input type="checkbox"/> \$150,000 to \$199,999 |
| <input type="checkbox"/> \$50,000 to \$74,999 | <input type="checkbox"/> \$200,000 or more      |
|   | <input type="checkbox"/> Do not wish to answer  |

**Thank you for completing the questions and for participating in the interview!**

## Appendix C

### Potential Experience Feature Checklist

#### ***POTENTIAL EXPERIENCE FEATURE CHECK LIST***

- |                    |                   |                     |
|--------------------|-------------------|---------------------|
| 1. O amazement     | 11. O morality    | 21. O smallness     |
| 2. O beauty        | 12. O mystery     | 22. O solemn        |
| 3. O brilliance    | 13. O nature      | 23. O special       |
| 4. O chills        | 14. O open-minded | 24. O spirituality  |
| 5. O connected     | 15. O overwhelmed | 25. O stunned       |
| 6. O direction     | 16. O power       | 26. O surprised     |
| 7. O familiar      | 17. O pride       | 27. O transcendence |
| 8. O fascination   | 18. O purpose     | 28. O unique        |
| 9. O grandeur      | 19. O rarity      | 29. O vastness      |
| 10. O inexplicable | 20. O religion    | 30. O vista         |

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