# BABY BOOMER VISITORS IN U.S. NATIONAL PARKS: EXPLORING AGE CHANGES, ACTIVITY SELECTION AND TRANSPORTATION MODE CHOICE

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ABSTRACT

Over the past few years, there have been reports of fewer young people and more older people visiting our national parks (Keen & Dorell, 2012; Nagourney, 2013). This topic is explored in detail to determine if this is true and also to discuss what any changes and differences could mean for park management. An analysis of visitor age data from approximately 250 visitor studies was conducted.

Also, activity selection of baby boomer visitors to national parks is explored. The literature suggests baby boomers are a group with diverse outdoor interests. Some are interested in adventurous pursuits, while others are interested in more tame forms of recreation. A quantitative study was conducted in Sequoia and Kings Canyon National Parks to see if this cohort is unique in terms of outdoor activity interests.

Finally, there is the potential to alleviate crowding, congestion, and air pollution in national parks through Alternative Transportation Systems (ATS) (i.e., shuttle buses). To accomplish this, parks need to find ways to get baby boomer visitors on buses and out of cars. Currently, the baby boomer demographic does not ride buses in national parks as often as do younger visitors. Many times, the freedom to travel as they choose is given as the reason. Specifically, the topic of freedom, as it relates to transportation, is explored. A study, via qualitative interviews at Sequoia and Kings Canyon National Parks, was conducted to determine specific factors inhibiting ridership of buses and factors that may increase ridership of buses among the baby boomer cohort.

A well-rounded study of the baby boomer generational cohort in a national park is the focus of this dissertation. Each of the three articles in the dissertation will provide

needed insight into the large baby boomer demographic. The studies provide specific, empirically-based results accessible to managers that could be employed to provide a better park visitor experience by learning more about this cohort.

# DEDICATION

This dissertation is dedicated to my wife, Carrie, for her unwavering support and perseverance throughout the dissertation journey. With you, anything seems possible.

# ACKNOWLEDGMENTS

First, and foremost, I thank my dissertation committee chairman, Dr. Jeff Hallo, for his continual insight, mentoring, and scholarly desire. Dr. Julia Sharp was always available to discuss the best way to analyze my quantitative data. Hon. Fran Mainella proved invaluable as we worked towards procuring a research permit with Sequoia and Kings Canyon National Parks. And, Dr. Fran McGuire provided a wealth of knowledge on the aging process and expressed unwavering enthusiasm with the study, which helped me to remain enthusiastic. I am grateful for the support afforded by the Clemson University Institute for Parks and accompanying George B. Hartzog Doctoral Fellowship, which allotted the funding which was necessary to carry out this research. Finally, this dissertation would not have been possible without the many skills and depth of knowledge acquired from the faculty within Clemson University's Department of Parks, Recreation and Tourism Management.

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# CHAPTER ONE

# INTRODUCTION

There have been reports of fewer young people and more older people visiting national parks over the past few years (Keen & Dorell, 2012; Nagourney, 2013). Perhaps this is due to the overall aging of the population. The graying of America has been documented (Sade, 2012). In 1900 less than four percent of the population was 65 or over. By 2000 this had increased to 12.4 percent (McGuire, Boyd, Janke, & Aybar-Damali, 2013). In 2010, 13.1 percent of the population was 65 or over (McGuire et al., 2013). Also, the portion of the population composed of individuals 85 years of age and older is the fastest growing age group (McGuire et al., 2013). Lifespans have been lengthened entirely due to changes in public health efforts, medicine, technology, and healthier lifestyles (Vaupel, 2010).

A factor influencing the aging of the U.S. population is the baby boomer cohort. The baby boomer generation came about mainly as a result of the increased social and economic prosperity of the post-WWII era (Cleaver & Muller, 2002; Light, 1988). Demographers expected a slight rise in births as families made up for lost time during the war, but not the drastic increase that actually came about. The baby boomer population is a cohort of 75 million who were born from 1946 to 1964. The baby boomers are one of the largest generations in U.S. history (U.S. Census Bureau, 2015). The first of the baby boomers reached age 65 in 2011. The aging of the baby boomers is expected to increase the median age of the U.S. population from 36 to 39 by 2040 and increase the percentage

of older adults (those 65 and older) from 12 percent to over 20 percent (Kinsella & He, 2009).

Baby boomers grew up in prosperous times relative to those born before 1946. The 1950s and early 1960s were decades of exceptional economic growth (Light, 1988). Baby boomers were able to enter the job market at a time when there was full employment; when the number of middle-class jobs was increasing rapidly (Roberts, 2012). And now, baby boomers are the wealthiest cohort in American history (Focalyst, 2007a). They have a collective wealth of over $7 trillion (PR Newswire, 2014). They have a median net worth of $112,048, which is about 15 times the $7,240 reported for those younger than 35 (Weimann, 2005). The typical baby boomer earns more than the average adult; they are over-represented (by as much as 50 percent) in the highest household income quintile (30 percent versus 20 percent for all households), and 63 percent of married baby boomers are dual-income couples (versus 53 to 56 percent of all married couples) (Muller & Cleaver, 2000).

Hundreds of thousands of adults over age 55 now take trips with Elderhostel (now Road Scholar), a non-profit organization specializing in trips for older people (Freedman, 1999). In 2001, baby boomers generated the highest volume of travel accounting for 44% of trips in the U.S. (Travel Industry Association of America, 2002). Over eighty-one million older consumers planned to spend a total of $126 billion on their next trip alone (Focalyst, 2007b).

Baby boomers may be the typical age group to visit national parks. For instance,

in Acadia National Park, the average age of respondents in a 1998 survey was 44.9 (University of Idaho, 1999). The average age of respondents in 2009 was 48.4 (University of Idaho, 2010). However, no studies have empirically determined the average age of visitors across the entirety of the U.S. National Park System (B. Meldrum, M. Littlejohn, personal communication, July 30, 2013). Also, it is unknown if the average age of park visitors is changing. However, some popular news outlets have stated the average age is changing (Keen & Dorell, 2012; Nagourney, 2013).

Some park unit designations may be more or less appealing to baby boomers. Specifically, it is likely that educational or cultural tourism will increase in the future as older people generally prefer to take vacations where they learn something new and embark on various historical and cultural experiences (World Tourism Organization, 2004). Therefore, historic and cultural sites could be of more interest to baby boomers because of their interest in these experiences. Most experts agree that as baby boomers age, they will remain interested in many outdoor recreation activities, such as sightseeing, walking for pleasure, and picnicking (Cordell et al., 1999).

Baby boomers may also be drawn to or avoid some parks because of the influence of climate or region. Studies (Radcliff, Dobalian, & Duncan, 2005; Smith & House, 2006) have shown that older Americans and retirees have migrated towards warmer climates. Snow birds are those who travel to the southern United States to escape the cold winters of the north. This group uses their flexible opportunities afforded by retirement to travel or seasonally migrate to a more favorable climate (Higgs & Quirk, 2007).

Baby boomers have become more active than the generation before them (Fitzpatrick & McCabe, 2009). Baby boomers see themselves as a youthful generation (Fitzpatrick, King, & Davey, 2013) and pride themselves on being youthful and more active than their parents. Baby boomers are also a group seeking to learn new things when traveling (Cleaver & Muller, 2002). Sometimes called Zoomers – 'baby boomers with zip' – active baby boomers have no intention of giving up their youthful pursuits as they age, and are looking for more active travel pursuits where health and fitness play prominent roles (Hudson, 2010).

The baby boomer cohort may differ from the general-age literature findings which have suggested a decline in outdoor activity participation in their desire for risk and adventure in leisure pursuits. In the US, 56 percent of baby boomers have taken an adventure-travel holiday or trip in the past five years (versus 49.6 percent of all 198 million American adults) (Muller & Cleaver, 2000).

Risk is sometimes mentioned in the literature related to adventure. Risk has been defined as the potential to lose something which holds value, and people may choose to risk the loss of health, money, self-esteem, and even life (Tholkes, 1998). Adventure has been described as "voluntary engagement in novel, uncertain and most often emotionally intense recreational activity" (Holyfield, Jonas, & Zajicek, 2005, p. 174). Exploration and discovery are core components of adventure, and hunger to learn from new situations has been associated with the definition of adventure (Addison, 1999). Baby boomers visit national parks as they are places to explore and discover. Perhaps leisure and recreational activities are unique for this cohort due to the life events they have thus far

witnessed.

Being daring and adventuresome is an attribute of some older travelers. For example, Cater (2000) found that an extreme activity called ‘jetboating’ (people travelling in a specifically designed boat at high speeds through a narrow canyon) in Queenstown, New Zealand is increasingly attracting older people as potential customers. Cater noted that older people were still attracted to this activity even though younger people were being used in a brochure for the promotion of the activity because it made them feel 'young again'. People over 50 are more adventurous than their parents, and they are often compelled to seek out new destinations and to try out new and more exciting leisure activities, often involving an element of discovery (Sellick, 2004).

Patterson and Pan (2007) found that the most significant motive for adventure activities and travel was the need to escape from everyday routines. This feeling of escapism is inexorably linked to the ‘peak experience’ phenomenon of which many adventure tourists thrive on and strive for (Swarbrooke, Beard, Leckie, & Pomfret, 2003). Further, the experience of seeing different landscapes and going to places where few people had previously ventured seem important in adventure. Adventure tourists have expressed that they love the thrill of the adventure itself, because they felt they were adventurous and enjoyed the adrenaline rush (Patterson & Pan, 2007).

Baby boomers have been shown to prefer adventure experiences under conditions that are less physically demanding and the use of trained guides who are employed to provide an educational component (Muller & Cleaver, 2000). The American Association of Retired Persons (AARP) commissioned a study (Davies, 2005) which found that a

majority of baby boomers considered themselves to be adventurous (55%), and 77% considered their travel experiences to be more adventurous than those of their parents. Many baby boomers simply do not enjoy routinized, boring pursuits and revel in escaping to physically challenging activities where they can have fun, rich and compelling experiences (Lehto, Jang, Achana, & O'Leary, 2008).

Baby boomers seem to be a group insisting on using their personal vehicles when entering parks (Pettebone, Newman, Lawson, Hunt, Monz, & Zwiefka, 2011). This is not that surprising when the transportation mode choice of baby boomers in national parks over time is examined. Baby boomers were exposed to a unique set of life events which may make the cohort distinct from others. Just as the first baby boomers were born in 1946, the states of the U.S. were proposing routes for the Interstate Highway System that would succeed in getting people to national parks faster than ever before, courtesy of their private cars (Weber, 2012). Widespread post-war affluence allowed for pervasive automobile use and the time needed to partake in leisure. Visitation to the national parks grew quickly in the decades after World War II at a pace that made the interwar years look tame by comparison (Sutter, 2002).

Automobile use dominates the way people move inside and outside cities (Grava, 2003). Thus, the challenge in national parks and elsewhere is how to transition from automobile usage to Alternative Transportation Systems (ATS). National park visitors have a long history of traveling to and within national parks by vehicle; a major part of the experience of visiting a park is driving through it (Hallo & Manning, 2009; Manning, Lawson, Newman, Hallo, & Monz, 2014b; Turnbull, 2003). For example, driving for

pleasure within Acadia National Park was found to be important for a majority of visitors (Hallo & Manning, 2009). Further, personal vehicle use played an important role in the development of many parks. The Blue Ridge Parkway was conceived and designed "as a linear park containing a road meant for pleasure driving and scenic appreciation" (Myers, 2006, p. 38).

Managing automobile traffic is a large concern for the U.S. National Park Service (NPS). As early as 1920, NPS director Stephen Mather wrote of the need for more and better roads as one of the most important issues the NPS faced (Hall, 1921). Nearly 283 million visits to NPS units occur annually (NPS, 2013a) and the automobile is the primary means of transportation to and through most national parks (Hallo & Manning, 2009; Manning, Lawson, Newman, Hallo, & Monz, 2014a). Thus, shuttle buses have been implemented in national parks such as Acadia and Glacier to mitigate congestion and other problems resulting from high private vehicle usage. The benefits of shuttle bus ridership are numerous with potentially drastic reductions in levels of automobile traffic, crowding, and air pollution (Mace, Marquit, & Bates, 2013). Denali National Park went so far as to ban private vehicles from entering the interior of the park in 1972 (Harrison, 1975; Mace et al., 2013).

As mentioned above, older visitors tend not to ride shuttle buses as often as do younger visitors when visiting national parks. In Rocky Mountain National Park a relatively higher preference was found for visitors age 40 and over for driving personal vehicles when compared to riding shuttle buses (Pettebone et al., 2011). And, elderly or disabled visitors may find it difficult to use public transportation as compared to personal

vehicles (Holly, Hallo, Baldwin, & Mainella, 2010). Finally, older visitors to Sequoia and Kings Canyon National Parks were found to be much less interested in a mandatory park shuttle when compared with an optional one (Dilworth, 2003).

## Purpose Statement

This dissertation is intended to begin to address the lack of empirical studies regarding the baby boomer cohort and its preferences in national parks of the U.S. Specifically, this dissertation furthers the examination of national park visitor age, activity selection of baby boomers, and reasons inhibiting ridership of park shuttles (with a focus on the issue of freedom) by baby boomer visitors to national parks. Three main goals guide this research:

1) To explore the age of visitors to units of the U.S. National Park System.

2) To investigate the activity selection of baby boomer national park visitors, and to determine if they seek adventurous or risk-oriented activities, as shown by the more recent literature.

3) To understand the factors inhibiting or facilitating ridership of shuttle buses by older national park visitors by teasing out freedom-related factors.

## Research Site

The quantitative study for goal two and the qualitative study for goal three were conducted at Sequoia & Kings Canyon National Parks in California. Sequoia National Park was created by Congress in 1890 as the nation's second national park (Runte, 2010). Kings Canyon National Park was created in 1940. In 1943 the parks were merged under one superintendent as a cost-saving war-time measure (Tweed, 2000). Sequoia and Kings Canyon National Parks (SEKI) cover the greatest elevation range (1,370-14,495 feet) of any protected area within the lower 48 contiguous states (Tweed, 2000). The parks contain living glaciers and thousands of lakes. The park contains Mount Whitney, at 14,495 feet the highest point in the contiguous U.S. The General Sherman tree is the largest tree on the planet, and calls Sequoia home. Together, the parks protect 864,383 acres and harbor over 700 miles of trails (Palmer, 2002; Tweed, 2000). Over 90 percent of Sequoia and Kings Canyon is designated wilderness (Tweed, 2000). In 2012, over 1 million people visited Sequoia (NPS, 2014a).

## Structure of the Document

The following dissertation is comprised of four additional chapters, one chapter for each of the three goals (formatted as journal manuscripts) and a summary chapter. Each chapter (except for chapter five) includes an introduction, literature review, description of the methods and analysis, results, and a discussion. Chapter two represents the investigation of national park visitor age and addresses the following research questions.

1): What is the average age of visitors in the U.S. National Park System?

2): Is the average age of visitors changing?

Chapter three represents the investigation of activity selection at Sequoia & Kings Canyon and addresses the following research questions:

1): What activities are baby boomers participating in when visiting Sequoia & Kings Canyon? What do they prefer to do?

2): Is desire for adventure and risk for baby boomers in national parks related to age?

3): Are life events and health measures related to activity selection?

Chapter four represents the investigation of freedom in regards to the use of shuttle bus transportation at Sequoia & Kings Canyon and addresses the following research questions:

1): What mode of travel are baby boomers using in Sequoia & Kings Canyon? Are they willing to change their mode?

2): What influences the transportation mode choice among baby boomer visitors in Sequoia & Kings Canyon?

3): What specific factors are inhibiting shuttle bus ridership?

4): How can buses or services be changed to better promote a sense of freedom and shuttle ridership by the baby boomer generation in national parks?

Chapter five is a summary of the results from these three studies and findings found in each chapter. This chapter expands the discussion to identify common results across each of the three studies.

# CHAPTER TWO

# EXPLORING THE AGE OF VISITORS TO U.S. NATIONAL PARK SYSTEM UNITS

The graying of America has been documented (Ferguson, 2013; Sade, 2012). In 1900 less than four percent of the population was 65 or over. By 2000 this had increased to 12.4 percent. By 2010, 13.1 percent of the population was 65 or over (McGuire, Boyd, Janke, & Aybar-Damali, 2013). Also, the portion of the population composed of individuals 85 years of age and older is the fastest growing age group (McGuire et al., 2013).

Americans are living longer than ever. In 1900, the median age of Americans was 23 (U.S. Census Bureau, 2002). By 1980, it had risen to 30 (Cordell et al., 1999). It was 35.3 in 2000 and had risen to 37.2 by 2010 (U.S. Census Bureau, 2010a). On average, life expectancy has increased by 2.5 years per decade for the past 160 years. Since 1950 the number of people celebrating their 100$^{th}$ birthday has doubled each decade (Vaupel & Kistowski, 2005). In 1935, the typical 65-year-old could expect to live approximately 4.5 more years in the U.S. A 65 year-old-man in 2015 can now expect to live 19.4 more years, to a total of 84.4 years of age (Social Security Administration, 2015). By 1970, the average life expectancy at birth was 70.8 years; in 2008, it had risen to 78.0 years (National Institute on Aging, 2013). The U.S. Census Bureau projects that average life expectancy will reach 79.5 years by 2020 (2013).

Lifespans have been lengthened due to changes in public health efforts, medicine, technology, and healthier lifestyles (Vaupel, 2010). This extended life expectancy will allow for people to continue enjoying life for a longer period of time. Perhaps parks will

see older visitors as a result. Aging is a developmental process, with many contributing factors (Carstensen, 2006). Chronological age, a measure of how long one has been alive fails to provide an accurate indicator of one's biological age, which focuses on changes in biological and physiological processes (Karasik, Demissie, Cupples, & Kiel, 2005). While cohorts are typically thought of as containing those with similar characteristics, this can cover up those individuals with differing interests, health and activity levels. An aging effect is a change in variable values which occurs among all cohorts independent of time, as each cohort ages. However, a cohort effect is a change which characterizes populations born at a particular point of time, and is independent of the aging process (Uhlenberg & Miner, 1996).

Generation X includes those who were born between 1965 and 1982 and are now between ages 33 to 50 (Carlson, 2009). Generation X has been shaped by a multitude of factors. Worldwide competition, MTV, and new technological advancements every six months are some factors that have been witnessed by this cohort. Large numbers of this cohort grew up in single parent homes due to the divorce rate doubling between 1965 and 1977 (O'Bannon, 2001). Generation X is the first generation with a higher proportion of women than men graduating from college (Carlson, 2009). Members of generation X seem to face a grim outlook when compared with the baby boomer generation in terms of income and wealth. Wage decline, the shifting of jobs to countries with lower labor costs and the loss of high-paying manufacturing jobs due to automation have differentiated this cohort from others (O'Bannon, 2001).

Another factor influencing the aging of the U.S. population is the baby boomer

cohort. The baby boomer generation came about mainly as a result of the increased social and economic prosperity of the post-WWII era (Cleaver & Muller, 2002; Light, 1988). Baby boomers have been described as a lucky and privileged cohort (Roberts, 2012). Baby boomers were able to enter the job market at a time when there was full employment and when middle-class jobs were increasing rapidly (Roberts, 2012).

The baby boomer population is a cohort of 75 million who were born from 1946 to 1964 (U.S. Census Bureau, 2015). The baby boomers are one of the largest generations in U.S. history (U.S. Census Bureau, 2010b). The first of the baby boomers reached age 65 in 2011. The aging of the baby boomers is expected to increase the median age of the U.S. population from 36 to 39 by 2040 and increase the percentage of older adults (those 65 and older) from 12 percent to over 20 percent (Kinsella & He, 2009).

The baby boomer cohort will continue to influence many aspects of U.S. society. For example, baby boomers across the country are returning to school, as this generation chooses to continue to learn (National Center for Policy Analysis, 2012). A 2007 study (U.S. News & World Report) found the number of college students between ages 40 and 64 jumped by almost 20 percent to nearly 2 million in the past decade. Adults aged 50 and older represent 3.8 percent of the 17 million students nationwide who are enrolled in courses at degree-granting colleges and universities (U.S. Department of Education, 2005).

Healthcare, including residential-based care facilities, will also be affected by the influx of baby boomers. Baby boomers are already making unsustainable demands on

the Medicare and Medicaid entitlement programs (U.S. General Accounting Office, 2002). By the year 2035, spending for Medicare alone will have more than doubled to 8 percent of gross domestic product (GDP) (Gigante, 2010). Baby boomers are also spending more on general health care (National Center for Policy Analysis, 2012). As the cohort ages, the demand for long-term care is expected to increase (Scanlon, 1998).

Baby boomers are the wealthiest cohort in American history (Focalyst, 2007a). They have a collective wealth of over $7 trillion (PR Newsire, 2014). They have a median net worth of $112,048, which is about 15 times the $7,240 reported for those younger than 35 (Weimann, 2005). The typical baby boomer earns more than the average adult; they are over-represented (by as much as 50 percent) in the highest household income quintile (30 percent versus 20 percent for all households), and 63 percent of married baby boomers are dual-income couples (versus 53 to 56 percent of all married couples) (Muller & Cleaver, 2000). Also, this group stands to inherit some $10.4 trillion in stock market gains and real estate assets, which will allow for increased travel (Howe, McMahon, & Propst, 1997).

Baby boomers have an abundance of leisure time and fewer social and familial obligations compared to younger people (Higgs & Quirk, 2007; Tate, Mein, Freeman, & Maguire, 2006). Dora Costa in her book *The Evolution of Retirement* argues that retired persons have become the true leisured class. It is anticipated that baby boomers will also spend time volunteering, in large part due to their increased education levels and free time (Einolf, 2009; Rozario, 2006). In contrast to baby boomers, generation X volunteers

and joins local organizations in greater numbers than baby boomers did when they were young (Shepherd, 2007).

Generation X came of age during Presidents Ronald Reagan, George H.W. Bush, and Bill Clinton. Members of generation X number roughly 51 million in size. Due to the high number of single families for generation X, multicultural friends replaced their traditional family structure (Keene & Handrich, 2011). Perhaps predicting they would eventually visit national parks in earnest, a *Time* article (Gross & Scott, 1990, p. 56) stated they "hold dear…national parks" and "would rather hike in the Himalayas than climb a corporate ladder."

Hundreds of thousands of adults over age 55 now take trips with Road Scholar, a non-profit organization specializing in trips for older people (Freedman, 1999). In 2001, baby boomers generated the highest volume of travel, accounting for 44% of trips in the U.S. (Travel Industry Association of America, 2002). However, by 2004 generation X had begun to outspend baby boomers on trips involving hotel stays (De Lollis, 2005). Members of generation X also differ in that they have been shown to avoid risk and have a low capacity for risk, whereas baby boomers have been shown to enjoy some amount of risk in terms of the activities in which they participate (Cater, 2000).

Comparing the average ages of visitors can be done where Visitor Service Project studies have been conducted in national parks. For instance, in Acadia National Park, the average age of respondents in a 1998 survey was 44.9 (University of Idaho, 1999). The average age of respondents in 2009 was 48.4 (University of Idaho, 2010). In Denali National Park, the average age of respondents in a 1988 study was 52 (University of

Idaho, 1989). The average age of respondents in a 2011 study of visitors to Denali National Park was 54.7 (University of Idaho, 2012a). In Great Smoky Mountains National Park, the average age of respondents in a 1996 survey was 43.2 (University of Idaho, 1997). The average age of respondents in a 2008 survey was 49.7 (University of Idaho, 2009). However, no studies have empirically and scientifically determined the average age of visitors across the entirety of the U.S. National Park System (B. Meldrum, M. Littlejohn, personal communication, July 30, 2013). Also, it is unknown if the average age of park visitors is changing. However, some popular news outlets have stated it is (Nagourney, 2013; Keen & Dorell, 2012).

Parks are predominate places that tourism and recreation occur in the U.S. It is inevitable that they will play host to an increased number of older visitors in the future. There are at least a dozen adventure travel companies that market primarily to the over 50-year-old traveler with a range of package tours that offer safaris, rafting trips, treks and sea kayaking (Buhalis & Darcy, 2010). U.S. national parks are made up of a variety of types of designations or classifications, termed units. Currently there are 407 total national park units within 20 named designations. There are more National Historic Sites (78) and National Monuments (78) than any other unit designation, including National Parks (59) (National Park Service, 2013c).

Some park unit designations may be more or less appealing to older travelers. Specifically, it is likely that educational or cultural tourism will increase in the future as older people generally prefer to take vacations where they learn something new and embark on various historical and cultural experiences (World Tourism Organization,

2004). Therefore, historic and cultural sites could also be of more interest to baby boomers because of their interest in these experiences. Park units that are officially designated as national parkways, national battlefields, national historic sites, gardens, and national memorials may be more visited by older visitors. Likewise, park units designated as national recreation areas, national scenic rivers, and national trails may see less use and interest by older visitors because they are focused more on active or adventuresome forms of outdoor recreation.

Older visitors may also be drawn to or avoid some parks because of the influence of climate or region. Studies (Radcliff, Dobalian, & Duncan, 2005; Smith & House, 2006) have shown that older Americans and retirees have migrated towards warmer climates. *Snow birds* are those who travel to the southern United States to escape the cold winters of the north. This group uses their flexible opportunities afforded by retirement to travel or seasonally migrate to a more favorable climate (Higgs & Quirk, 2007). States such as Nevada and North Carolina are seeing focused growth as retiree migration destinations, in large part because of factors including a favorable climate with mild winters, an attractive natural environment, coastal location, and a wide selection of small towns and rural areas (Sharma, 2012).

## Research Questions

This study is intended to examine the age of national park visitors and determine if it is changing. Specifically, this study will address the following research questions:

1) What is the average age of visitors in the U.S. National Park System?

2) Is the average age of visitors changing?

## Methods

### *Visitor Services Project*

The Visitor Services Project (VSP) is an initiative of the National Park Service (NPS) Social Science Program. The NPS sponsored visitor surveys through the VSP at the University of Idaho for 30 years (Neher, Duffield, & Patterson, 2013). The VSP began in 1982 when the NPS recognized there was a need to learn more about visitors and their opinions (Littlejohn & Hollenhorst, 2006). Questions included on VSP surveys cover a diverse array of areas (e.g., prior park experience, activity selection, demographics, evaluation of facilities and services). Questions are of three types—core: basic questions asked in every study; common: questions frequently asked such as expenditures, crowding issues, importance, and reasons for visiting; and customized: questions designed specifically to meet a park's needs, such as opinions on a prescribed burn policy. Data have been collected since 1988, and survey results are publicly available from the University of Idaho Park Studies Unit's online database (University of Idaho, 2014). The database now contains results from over 250 surveys conducted in over 140 park units.

### *Data collection methods*

Median ages of U.S. citizens were obtained to compare with the age of visitors between 1988 and through 2011. Park visitor age data were obtained in the form of visitor studies conducted in NPS units from the University of Idaho's Park Studies Unit

VSP database. Responses from over 102,000 visitors from approximately 250 national park study projects conducted in over 140 units since 1988 and through 2011 were analyzed. All regions and unit types of the U.S. National Park System are represented. Sample sizes for the studies vary from 340 to 1,600 visitors. Approximately 7 to 10 studies are conducted per year. The typical group size of park visitors is two (37%), followed by four (22%). The average response rate is 73%. The database containing the survey results is one of the largest social science databases that focuses on human-environmental interaction in general and protected areas (University of Idaho, 2014). The data were entered into SPSS 22.0. The variables examined were study year, VSP mean age, VSP mean age of those 18 years old and older, and U.S. median age. Three separate regression analyses were conducted to examine the individual slopes for U.S. median age, VSP mean age, and VSP mean age for those 18 and older. Two regression analyses were conducted which considered study year, an indicator variable representing whether the response was the U.S. median age or the VSP mean age (or the VSP mean age for those 18 and older in the second analysis), as well as the interaction between study year and the indicator variable to compare the slope of U.S. median age to that of the VSP mean age, and to that of VSP mean age for those 18 and over.

## Results

The mean age of all visitors, when examining all available years of data, was found to be 39.5 years old. When looking at visitors 18 and over, the mean age was 47.3

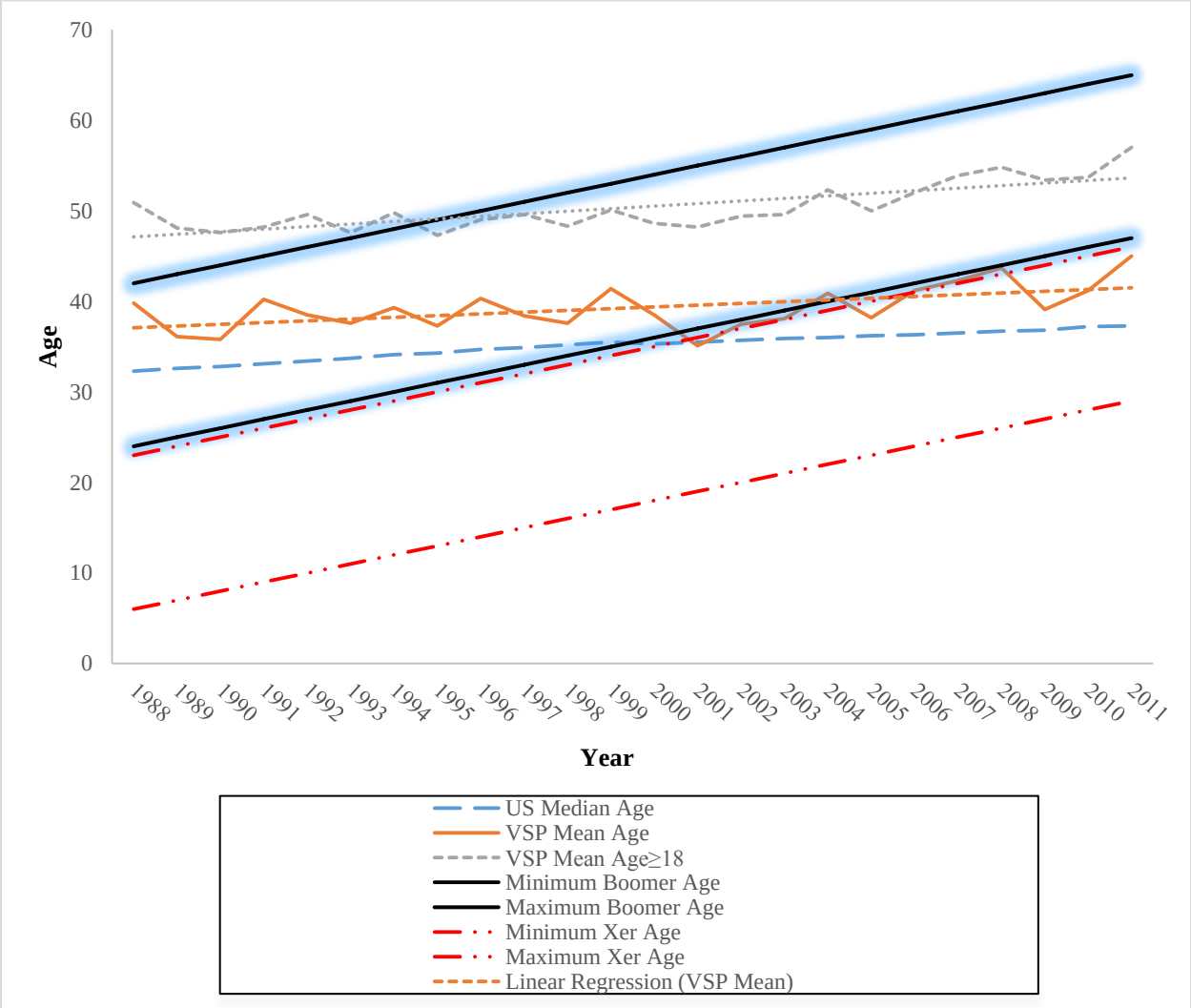
years old. Figure 1.1 shows the age of baby boomers from 1988 through 2011, as well as the age ranges for members of the generation X cohort, and VSP mean age and VSP mean ages for those 18 and over. The median ages of U.S. citizens are also presented. The mean age of visitors increased from 39.8 in 1988 to 45.0 in 2011.

The regression model with study year as the independent variable and the dependent variable of U.S. median age was found to be significant $F(1,22) = 823.72$, $\beta = 0.21$, $SE = 0.24$, $R^2 = 0.97$, $p < .001$. The regression model with study year as the independent variable and the dependent variable as VSP mean age was found to be significant $F(1,22) = 10.14$, $\beta = 0.19$, $SE = 2.04$, $R^2 = 0.32$, $p = 0.004$. And, the regression model with study year as the independent variable and VSP mean age 18 and over as the dependent variable was found to be significant $F(1,22) = 32.21$, $\beta = 0.28$, $SE = 1.69$, $R^2 = 0.59$, $p < .001$. The slopes from the regression analyses for each of VSP mean age and VSP mean age 18 and over were compared to the slope for U.S. median age; neither slope was found to significantly differ from the slope for U.S. median age ($F(1,44) = 0.07$, $p = 0.79$ and $F(1,44) = 2.15$, $p = 0.15$ respectively).

Baby boomers were the group to visit national parks for many years, from 1988 to 2004 when looking at the VSP mean age. Then, the baby boomer visitors dropped out of the cohort age range. The cohort began to enter the age range of the generation X cohort, and remained there for the last year of study data (2011). In terms of those visitors who were 18 and over, they entered the baby boomer age range as of study year 1994 and remained in the age range for the last year of data (2011). The U.S. median population

remained within the baby boomer cohort until 1999, when the population entered the generation X cohort.

Figure 1.1 Average age by year of U.S. National Park System visitors




## Discussion and Conclusion

The generation X cohort is becoming the typical group to visit national parks. Adult park visitors are getting older, likely as a result of an aging U.S. population. Parks

are not necessarily attracting more older visitors, relative to the U.S. population. Members of generation X are entering middle age, with some members of the cohort being 50 years old in 2015. Older visitors to national park units are different than younger visitors. Of those visitors who are 18 and over, baby boomers are the typical visitors. Older visitors tend to have considerable wealth, show an interest in learning, are highly educated, and have copious amounts of free time (Cleaver & Muller, 2002; Focalyst, 2007a; Higgs & Quirk, 2007). Because of these factors, baby boomers may have unique activity preferences and desires when visiting national parks. For example, a recent study at Sequoia and Kings Canyon National Parks (SEKI) found that older visitors, as compared to the general visitor population, participate in more activities and are likely to engage in active and adventurous activities (Wilson, n.d.). This seems to be somewhat of a reversal of the historical literature, which stated that as adults become older they shift from active to more passive forms of recreation, decline in participation, and move from outdoor to indoor activities (Kelly, 1980). Also, older visitors in the SEKI study seem to be much more interested in appreciative or learning-based activities, such as wildlife viewing. Perhaps baby boomers are finally showing that they are more active than their parents were.

Figure 1.1 sheds more light on the interesting characteristics of visitor age to national parks through the years. Those visitors aged 18 and over were not within the baby boomer age range until 1994. They have been within the age range since then, with a mean age of 57 in 2011. This means that the typical *adult* visitor is from the baby boomer cohort. However, average age visitors were within the baby boomer age range

from 1988 through the year 2000. Aside from a slight drop into the age range in 2003, the group fell outside of the baby boomer age range in 2000. This means, when considering *all* visitors to parks, generation X members are becoming the typical visitor.

The baby boomer cohort is a large segment of visitors to national parks. Baby boomers accounted for 65.1% of the data that were examined. Park managers may need to further adapt their park or its management to older visitors. For example, this could include offering age-appropriate interpretation services, more developed facilities and trails, and enhancing ADA compliance. As the population gets older, these functions will help more people continue to enjoy the parks. Yet, results from this study also suggest that the national parks are now seeing the typical visitor begin to transition to another population cohort, generation X. Adapting to the generation X cohort may have opposing needs, such as offering interpretation functions via technology and an increased need for public transportation.

The findings from this study will help NPS managers and decision makers to be more aware of the characteristics of visitors to their parks and plan for differing visitors. The U.S. population is aging, and visitors to parks will likely continue to age. The NPS can embrace this finding and reap benefits, such as having more potential volunteers and visitors with more resources to contribute to friends groups. However, there may be a greater need to warn older visitors of the potential risks inherent in visiting a park. Also, planning for more efficient and accessible routes from parking areas to often-used resources (front and backcountry) may need to be implemented. Further, offering interpretation services specifically geared to older visitors could prove beneficial, as they

yearn for knowledge.  In short, tailoring some park experiences and facilities to baby boomer visitors can increase the safety of visitors, enable them to become more involved, and engage them in the parks they enjoy visiting.

# CHAPTER 3

# ACTIVITY SELECTION AMONG BABY BOOMER NATIONAL PARK VISITORS: THE SEARCH FOR A SENSE OF ADVENTURE

Leisure is a fundamental part of life (Iso-Ahola & Mannell, 2004; Kleiber, Larson, & Csikszentmihalyi, 1986). Leisure emerges in childhood when children are relaxed and unconcerned with the past or future, so long as their basic needs are met (Kleiber, Walker, & Mannell, 2011). Leisure is used in adulthood as a coping mechanism to deal with work-related stress (Trenberth & Dewe, 2002). And, leisure is an important contributing factor associated with life satisfaction while in retirement (Nimrod, 2007).

Leisure changes as we age. Growing children and aging adults typically change their leisure interests and activities. During adulthood, role responsibilities such as being a parent or worker affect leisure behavior (Kleiber et al., 2011). Increased age historically corresponded with a decrease in participation in outdoor recreation, despite the abundance of free time older people generally have (Kelly, 1980). The National Recreation Survey report (Outdoor Recreation Resources Review Commission, 1962) focused on the social correlates of recreation. Age was found to be statistically, negatively related to general participation in outdoor recreational activities.

Aging is associated with loss, be it loss of capacity, loss of companions, or loss of role identity. For example, the decline of visual acuity could result in the loss of the ability to play a sport such as baseball. The first physical signs of aging are likely to lead to an awareness of one's mortality and create a sense of urgency about life (Irwin &

Simons, 1994). Because of these losses, the number and impact of leisure constraints increase as people age (McGuire, Boyd, Janke, & Aybar-Damali, 2013; McGuire & Norman, 2005).

The U.S. population is aging (U.S. Census Bureau, 2011). America now possesses not only the largest and fastest-growing population of older adults in history but also the healthiest, most vigorous, and best educated (Freedman, 1999). Less than four percent of the population was 65 or over in 1900. By 2000 this had increased to 12.4 percent, and by 2010 13.0 percent of the population was 65 or over (U.S. Census Bureau, 2011). On average, life expectancy has increased by 2.5 years per decade for the past 160 years, and since 1950 the number of people celebrating their 100$^{th}$ birthday has doubled each decade (Vaupel & Kistowski, 2005). A 65 year old male in 2015 can expect to live 19.4 more years (Social Security Administration, 2015), which allows for a potentially longer time for leisure. Lifespans have been lengthened and some barriers to leisure have been removed due to changes in public health efforts, medicine, technology, and healthier lifestyles (Vaupel, 2010).

A major factor influencing the aging of the U.S. population is the baby boomer cohort. There are now 75 million baby boomers in the U.S. (U.S. Census Bureau, 2015). The baby boomer generation came about mainly as a result of the increased social and economic prosperity of the post-World War II era (Cleaver & Muller, 2002). It thus became the norm to have more, and the baby boomer generation was fully exposed to those conditions. Air and car transportation became affordable, enabling travel to far-away places. As a result, baby boomers have been described as a lucky and privileged

cohort (Roberts, 2012). This group contains children who came of political age with Sputnik and the civil rights movement, others who grew up with Vietnam and Earth Day, and still others who saw Watergate and the OPEC oil embargo unfold (Light, 1988). This is an important issue when studying leisure participation because aging is affected by societal changes (Agahi, Ahacic, & Parker, 2006). For example, those growing up in the 1930's depression era were shown to place less value on leisure than did other cohorts and are more associated with remaining busy (Elder, 1999; Kleiber et al., 2011). An aging effect is a change in variable values which occurs among all cohorts independent of time, as each cohort ages. However, a cohort effect is a change which characterizes populations born at a particular point of time, and is independent of the aging process (Uhlenberg & Miner, 1996).

Baby boomers are an important group to study within a national park context because they are a large group which enjoys visiting national parks (Nagourney, 2013). Perhaps baby boomers differ from the generalized literature findings in their desires for travel and leisure activities due to the life events they have witnessed. Baby boomers have become more active than the generation before them (Fitzpatrick & McCabe, 2009). Baby boomers see themselves as a youthful generation (Fitzpatrick, King, & Davey, 2013) and pride themselves on being youthful and more active than their parents. Baby boomers are also a group seeking to learn new things when traveling (Cleaver & Muller, 2002). Sometimes called Zoomers – 'baby boomers with zip' – active baby boomers have no intention of giving up their youthful pursuits as they age and are looking for more active travel pursuits where health and fitness play prominent roles (Hudson, 2010).

Baby boomers may also differ from the literature findings of general-age visitors, which have suggested a decline in outdoor activity participation, in their desire for risk and adventure in leisure pursuits. In the US, 56 percent of baby boomers had taken an adventure-travel holiday or trip in the past five years (versus 49.6 percent of all 198 million American adults) (Muller & Cleaver, 2000). Adventure has been described as "voluntary engagement in novel, uncertain and most often emotionally intense recreational activity" (Holyfield, Jonas, & Zajicek, 2005, p. 174). Exploration and discovery are core components of adventure, and hunger to learn from new situations has been associated with the definition of adventure (Addison, 1999). Risk is sometimes mentioned in the literature related to adventure. Risk has been defined as the potential to lose something which holds value, and people may choose to risk the loss of health, money, self-esteem, and even life (Tholkes, 1998).

Baby boomers may visit national parks because they are places to explore, discover, take risks, and seek adventure. Perhaps leisure and recreational activities in national parks are unique for this cohort due to the life events they have thus far witnessed. This study sought to find whether baby boomer visitors to a national park are participating in adventurous pursuits more so than the early literature findings suggest. Motivations for adventure will be explored for baby boomers visiting national parks.

## Research Questions

1) What activities are baby boomers participating in when they visit a national park? What do they prefer to do?

2) Are activity participation rates different from a 2012 study of general visitors?

3) Is desire for adventure and risk for baby boomers in a national park related to age?

4) Are life events and health measures related to activity selection?

## Literature Review

### *Leisure and Aging*

There has been relatively little research on older people engaged in leisure activities (Gibson, 2006; McGuire, Samdahl, Scott, & Weissinger, 2000). However, engagement in an activity earlier on in life is a strong predictor of participation in leisure activities in late life (Agahi et al., 2006; Verbrugge, Gruber-Baldini, & Fozard, 1996). A major planning document released in 2001 found that those over 50 had for the most part not adopted physically active lifestyles (Chodzko-Zajko, Sheppard, Senior, Park, Mockenhaupt, & Bazzarre, 2005). Visitors to outdoor recreation areas, especially more natural resource-oriented areas such as national forests, national parks, and wilderness, tend to be young to middle-age and of relatively high socioeconomic status (Cole, Watson, & Roggenbuck, 1995; Manning, 2011).

A large-scale analysis of a nationwide survey of recreation participation was conducted and found strong relationships in terms of demography and socioeconomic status (Kelly, 1980; Manning, 2011). Age was found to be strongly and inversely related to those recreation activities that require physical strength and endurance. Also, the stage of family cycle was found to be highly inter-correlated with age so that its effects on recreation activities are similar to those of age. Based on findings from hundreds of

studies, four main changes have been found in leisure behavior as people age: a decline in participation, a shift from active to more passive leisure, a shift from outdoor leisure to indoor activities, and a decline in the search for novelty (Gibson & Singleton, 2012).

Middle age brings along many changes, with some being more free time and greater financial security. Erik Erikson, one of the most influential psychoanalysts of the 20th century is known for his lifespan framework, which includes extensive detail on middle age and later life. Erikson (1963) claims that productivity and contributions to society become priorities in middle adulthood. The failure to act results in stagnation, and becoming productive versus becoming stagnant is the psychosocial conflict associated with this stage of development (Erikson, 1963). Enjoyable activities are thus discontinued to make societal contributions and increase productivity.

With respect to Erikson's lifespan research, several theorists have posited that there is an early aging transition that differs in character from the issues of advanced age he espoused (Antonovsky & Sagy, 1990; Vaillant, 2002). Specifically, researchers have noted the continuance of activities rather than a change in interests. Erikson's framework seems more rigid when compared to the more recent research findings. Perhaps this is because people are living longer than they were when Erikson developed his framework, and they are also more healthy (Agahi & Parker, 2005).

*Successful Aging*

As people get older, the chronological age of the individual may be a less reliable indicator of behavior, perhaps because aging is a developmental process (Carstensen, 2006). In a study of middle-aged and older-aged adults, participants were found to want

to be younger than they were (Kotter-Gruhn & Hess, 2012). A successful later life typically includes a component of leisure (Vaillant, 2002). The aging and leisure literature cites many instances of the term *successful aging* (Depp, Vahia, & Jeste, 2010). A meta-analysis of 28 quantitative studies with 29 different definitions showed the most frequent correlates of the various definitions of successful aging included: a younger age (i.e., closer to age 60), being a non-smoker, absence of chronic disease, having more social contacts, a better self-rated health, an absence of depression, absence of cognitive impairment, fewer medical conditions, and exhibiting higher levels of physical activity/exercise (Depp et al., 2010).

Due to their natural resources, large size, and iconic scenery, national parks are places that can easily facilitate successful aging by providing health-oriented physical activities relevant to older adults (Beedie & Hudson, 2003). The National Park Service (NPS) has begun to generate such a link by integrating the Healthy Parks Healthy People (HPHP) program to use the value of parks to improve health and well-being (NPS, 2012). Many NPS units have begun to implement HPHP programs with success (Thomsen, Powell, & Allen, 2014; Schmalz, Hallo, Griffin, Kusch, & Arce, 2014). For example, physical activity levels of visitors have increased through initiatives such as active interpretive programs in Great Smoky Mountains National Park.

### *Activity Selection*

There are a variety of reasons people choose to participate, or not participate in, leisure activities. Intrinsic motivation encourages participation based on internal,

personal interest and enjoyment (Kleiber et al., 2011). For instance, some people choose to participate in running races because it is enjoyable and rewarding in and of itself. Extrinsic motivation is based on involvement where an activity is rewarding for external reasons. For example, running a race to win an award is a form of extrinsic motivation. Other reasons for participation include heritage and cultural norms and prior experiences. Some cultural groups are less interested in activities than others (Dwyer, 1994). For example, findings suggest that minority subcultural groups, when compared to whites, tend to use areas that are closer to home and use and prefer more highly developed facilities (Manning, 2011). Also, visiting a certain area helps one to become more familiar with it. A visitor who has an enjoyable time backpacking at a specific national park may desire to return to that area.

An additional reason for choosing to participate in activities is due to the many benefits one can gain from participation. Benefits refer to enrichments and improvements in the personal, social, economic and environmental outcomes as a result of participation in activities (Overbaugh, Alessa, Chapin, & Kliskey, 2007). By going on a camping trip together, a family may be able to build stronger familial bonds. The Recreation Experience Preference Scales (REP) were developed by Driver (1983) to measure the extent to which recreation participation results in experience opportunity outputs and outcomes.

For some, there are constraints and/or barriers to participation, such as lack of strength. For instance, some activities such as whitewater kayaking and backpacking require strength to cross rough terrain. Interpersonal constraints are social factors which

influence the formation of leisure preferences (friends, for example, who prefer different activities). Other barriers, termed structural constraints, occur after leisure preferences are formed but before actual participation takes place. These are most often the lack of time and money (Godbey, Crawford, & Shen, 2010).

Activities with an element of adventure are becoming more popular. Some of the fastest growing activities in terms of percentage increase in number of participants between 1999-2001 and 2005-2009 were kayaking, off highway driving, waterskiing, and orienteering (Cordell, 2012). Nationally, by 2050 the number of biking participants is expected to grow by 70 percent; rock climbing by 50 percent, and backpacking by 26 percent (Cordell et al., 1999). This is not just a U.S. trend; the number of participants in adventure tourism is increasing drastically in China as well (Chen, Guo, Liu, & Liu, 2013).

Being daring and adventuresome is an attribute of many older travelers. For example, Cater (2000) found that an extreme activity called ‘jetboating’ (people travelling in a specifically designed boat at high speeds through a narrow canyon) in Queenstown, New Zealand is increasingly attracting older people as potential customers. Cater noted that older people were still attracted to this activity even though younger people were being used in a brochure for the promotion of the activity because it made them feel 'young again'. People over 50 are more adventurous than their parents, and they are often compelled to seek out new destinations and to try out new and more exciting leisure activities, often involving an element of discovery (Sellick, 2004). A study of rafting trip participants, 78 percent of which were between 35 to 54 years of age,

discovered that primary motivations for rafting were “Allure of danger/risk taking/ adrenaline” or undertaking the activity because it offered a chance to “Try something new” (Peden & Schuster, 2005, p. 43).

Adventure activities and tourism has been defined as being “physically bracing, adrenaline-driven, somewhat risky, with moments of exhilaration punctuated by many opportunities to assess and reassess what has just been done or accomplished” (Muller & Cleaver, 2000, p. 156). Outdoor adventure activities include pursuits such as mountain climbing, strenuous hiking, mountain biking and wilderness camping (Boyes, 2013). Adventure activities and tourism involves such active participation from individuals that it can result in the ultimate in escapism. Patterson and Pan (2007) found that the most significant motive for adventure activities and travel was the need to escape from everyday routines. This feeling of escapism is inexorably linked to the ‘peak experience’ phenomenon of which many adventure tourists thrive from and strive for (Swarbrooke, Beard, Leckie, & Pomfret, 2003). Further, the experience of seeing different landscapes and going to places where few people had previously ventured seem important in adventure. Adventure tourists have expressed that they love the thrill of the adventure itself, because they felt they were adventurous and enjoyed the adrenaline rush (Patterson & Pan, 2007). Flow is a term that is often mentioned in the literature on adventure. Czikszentmihalyi (1975) defined flow as a peculiar dynamic state, a holistic sensation that people feel when they act with total involvement. Participation in mountaineering, for example generates feelings of flow as it is extremely engaging and typically involves life threatening risks (Pomfret, 2006).

Baby boomers in particular seem to crave adventurous activities and travel experiences. More baby boomer senior households have been shown to participate in leisure travels than older senior households (Jang & Ham, 2009). These older adults are now demanding trips that involve physical challenge (if not actual danger) and travel that involves an inner journey, an intellectual challenge, as well as a desire to explore new places and cultures (Lipscombe, 1995). Many baby boomers simply do not enjoy routinized, boring pursuits and revel in escaping to physically challenging activities where they can have fun and have rich and compelling experiences (Lehto, Jang, Achana, & O'Leary, 2008). Baby boomers have been shown to prefer adventure experiences under controlled conditions that are less physically demanding and the use of trained guides who are employed to provide an educational component (Muller & Cleaver, 2000). The AARP commissioned a study (Davies, 2005) which found that a majority of baby boomers considered themselves to be adventurous (55%), and 77% considered their travel experiences to be more adventurous than those of their parents.

## Methods

### *Study Area*

Sequoia National Park was created by Congress in 1890 as the nation's second national park (Runte, 2010). Kings Canyon National Park was created in 1940. In 1943 the parks were merged under one superintendent as a cost-saving war-time measure (Tweed, 2000). Sequoia and Kings Canyon National Parks (SEKI) cover the greatest elevation range (1,370-14,495 feet) of any protected area within the lower 48 contiguous

states (Tweed, 2000). SEKI contains active glaciers and thousands of lakes. Mount Whitney, at 14,495 feet the highest point in the contiguous U.S., is contained within SEKI. The General Sherman tree is the largest tree on the planet, and calls SEKI home. Together, the parks protect 864,383 acres and contain over 700 miles of trails (Palmer, 2002; Tweed, 2000). Over 90 percent of SEKI is designated wilderness (Tweed, 2000). In 2013, nearly 1.5 million people visited SEKI (NPS, 2014a).

*Survey Instrument*

The questionnaire was developed in the spring of 2014 and was reviewed by experts, specifically the Research Coordinator and Superintendent of SEKI and four faculty members of Clemson University. Questions focusing on activity characteristics (e.g., "Which outdoor recreational activity(ies) do you enjoy?") and personal characteristics (e.g., "Have you visited Sequoia-Kings Canyon before?") were asked. Many of the questions employed a Likert-type scale so that a range of answers (e.g., from strongly disagree to strongly agree) was obtained. Both open and close-ended questions were asked in the questionnaire about visitors' planned and current activity selection. Responses for neutral importance of activity selection were not included during coding. Further, responses for very unimportant, unimportant, important, and very important were added to determine participation in activities. Questions were asked for information on adventure and risk levels, life events witnessed (employed or not and having children at home or not), and transportation habits. Also, personal information such as age and gender was gathered. Many items from the Recreation Experience Preference (REP) scales were integrated in order to measure motivations for visiting SEKI. The REP scales

were designed to measure which specific experiences are desired and expected from individuals choosing to engage in specific leisure activities (Driver, 1983).

*Recreation Experience Preference*

The motivation measures applied in the survey of SEKI visitors were informed by the REP scales (Manfredo, Driver, & Tarrant, 1996). These include measuring the REP's motivational dimensions of Achievement/Stimulation, Autonomy/Leadership, Being with Similar People, Meeting New People, Learning, Enjoying Nature, Introspection, Escape Personal-Social Pressures, Escape Physical Pressure, Teaching-Leading Others, Risk Taking, and Risk Reduction. These domains were chosen because they are closely related to the research questions of this study.

## Qualitative Pilot Test

The questionnaire underwent a qualitative pilot test in addition to the expert review. Pilot test respondents were born between 1945 and 1983. Six of the eleven total respondents were within the age range of 1946 to 1964 and are considered baby boomers. Another respondent was born in 1966, while yet another cusp respondent was born in 1945. Once the completed questionnaires were returned, pilot test respondents were asked about the practicality and order of the questionnaire. The qualitative pilot test showed that, while there were a few general comments about the length of the survey, the questionnaire as a whole was understandable and interesting to the respondents. It was determined that implementation of the survey to visitors at SEKI could proceed.

*Data Collection*

The Institutional Review Board (IRB) of Clemson University and SEKI granted approval for this study. A quantitative survey of visitors to SEKI measured activity selection. Paper-based questionnaires were administered to visitors at visitor centers in the parks to determine which activities visitors participated in. Data collection occurred over four weeks in July-August of 2014 to coincide with the peak visitor use season in SEKI. A systematic sampling technique with a random start point was used (Babbie, 2011). Every 6th visitor was approached and asked if he or she would be interested in completing a five-to-ten minute paper questionnaire. Visitors were screened to ensure they were born within the baby boomer birth year range of 1946 to 1964. Visitors who agreed to complete the survey did so on-site. Questions on activities participated in were used from a 2012 VSP study of general visitors to SEKI to compare the results via one sample proportion testing with the results of this study. Based on the number of tests conducted, a Bonferroni adjusted p value of 0.004 was used.

Questionnaire results were coded and entered into SPSS 22.0 software. Closed-ended responses were transferred directly into the software. Descriptive coding was conducted on the open-ended responses. Codes were derived from the data employing an inductive technique, as they emerged from the responses. Multiple factors in a single open-ended response had multiple codes assigned. Descriptive statistics were formulated to gain more insight into the study group. Also, frequencies and relative frequencies were computed to show activity selection for baby boomers, which REP items were employed, and which life events were witnessed.

The questionnaire asked respondents whether or not they had children living at home with them. Two-sample proportion tests were conducted to examine whether having children at home or not is related to the type of activities baby boomers choose. The proportion of individuals having children living at home, for example that camped was compared to the proportion of individuals that do not have children living at home that camped. Respondents were then asked if they were employed or not. Two-sample proportion tests were conducted to determine if the proportion of individuals participating in an activity that are employed differed from the proportion of individuals that were not employed. A Bonferroni correction was instituted due to the number of two-sample proportion tests (corrected p-value for each life event of 0.004).

The questionnaire asked respondents to state both how healthy and active they felt they were. A five-point Likert scale was used (1= strongly disagree to 5 = strongly agree). Two sample t-tests were conducted to compare the mean self-perceived health of those not engaged in activities to the mean self-perceived health of those who were engaged in activities. Two sample t-tests were also conducted to compare the mean self-perceived activeness of those not engaged in activities to the mean self-perceived activeness of those who were engaged in activities. A Bonferroni correction was instituted due to the number of t-tests (corrected p-value for health and activeness of 0.004).

The REP items designated by asterisks in Table 2.1 were used to create a risk and adventure motivation index. A linear regression was conducted to determine if risk and adventure as motivations for visiting SEKI were related to age. The computed risk and

adventure motivation index served as the dependent variable, while age served as the independent variable.

## Results

A total of 403 questionnaires were obtained from a total of 474 people contacted at SEKI, yielding a response rate of 85.0%. All 403 questionnaires were completed by baby boomers (born between 1946 and 1964). Table 2.1 shows the reasons that respondents stated for visiting SEKI. The reasons for visiting are based on the REP scale items and use a 5-point Likert scale. Of the REP domains studied, the three which respondents agreed with most regarding reasons for visiting SEKI were: 'Enjoy Nature' (*M*=4.7), 'Learning' (*M*=4.4), and 'Escape Physical Pressure' (*M*=4.0). The three domains that respondents agreed with least regarding reasons for visiting SEKI were: 'Autonomy/Leadership' (*M*=2.8), 'Risk Reduction' (*M*=2.8), and 'Achievement/Stimulation' (*M*=3.0).

Table 2.1 Reasons for visiting SEKI

| **Domain**/Item | **Strongly Disagree % (n)** | **Disagree% (n)** | **Neutral % (n)** | **Agree % (n)** | **Strongly Agree % (n)** | **Mean** | **SD** |
|---|---|---|---|---|---|---|---|
| **Enjoy Nature** | - | - | - | - | - | **4.76** | **0.40** |
| To view the scenery | 0 (0) | 0 (0) | 1.3 (5) | 21.3 (85) | 77.4 (308) | 4.76 | 0.45 |
| To view the scenic beauty | 0 (0) | 0 (0) | 1.0 (4) | 16.9 (67) | 82.1 (326) | 4.81 | 0.41 |
| To be close to nature | 0 (0) | .5 (2) | 2.8 (11) | 23.4 (92) | 73.3 (288) | 4.69 | 0.54 |
| **Learning** | - | - | - | - | - | **4.41** | **0.61** |
| To learn more about nature | .3 (1) | 1.0 (4) | 7.5 (30) | 47.1 (186) | 44.1 (174) | 4.33 | 0.68 |
| To learn about things there | .5 (2) | 1.0 (4) | 7.1 (28) | 38.8 (154) | 52.6 (209) | 4.42 | 0.71 |
| *To discover something new | .3 (1) | .5 (2) | 7.9 (31) | 35.0 (137) | 56.3 (220) | 4.46 | 0.68 |
| **Escape Physical Pressure** | - | - | - | - | - | **4.01** | **0.73** |
| To experience tranquility | .8 (3) | 2.3 (9) | 13.6 (53) | 38.2 (149) | 45.1 (176) | 4.24 | 0.83 |
| *To be away from crowds of people | 2.3 (9) | 8.8 (35) | 22.3 (89) | 42.3 (169) | 24.3 (97) | 3.77 | 0.98 |
| **Similar People** | - | - | - | - | - | **3.96** | **0.82** |
| To be with members of your group | 4.4 (17) | 5.9 (23) | 19.7 (77) | 30.9 (121) | 39.1 (153) | 3.94 | 1.10 |
| To be with others who enjoy the same things you do | 1.8 (7) | 3.1 (12) | 18.6 (73) | 42.2 (166) | 34.3 (135) | 4.04 | 0.90 |
| To be with people having similar values | 2.3 (9) | 4.7 (18) | 23.8 (92) | 39.3 (152) | 29.9 (116) | 3.89 | 0.96 |
| **Escape Personal-Social Pressures** | - | - | - | - | - | **3.74** | **0.95** |
| To help release or reduce some built-up tensions | 5.1 (20) | 10.3 (40) | 23.9 (93) | 35.7 (139) | 25.0 (97) | 3.65 | 1.11 |
| To have your mind move at a slower pace | 3.9 (15) | 7.2 (28) | 21.4 (83) | 41.7 (162) | 25.8 (100) | 3.78 | 1.03 |
| To avoid everyday responsibilities for awhile | 4.1 (16) | 9.0 (35) | 20.2 (78) | 34.4 (133) | 32.3 (125) | 3.81 | 1.10 |
| **Introspection** | - | - | - | - | - | **3.48** | **1.01** |
| To think about your personal values | 4.0 (15) | 9.1 (35) | 34.2 (131) | 32.1 (123) | 20.6 (79) | 3.56 | 1.03 |
| To think about who you are | 5.4 (21) | 13.2 (51) | 34.5 (133) | 28.2 (109) | 18.7 (72) | 3.41 | 1.09 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **New People** | - | - | - | - | - | **3.26** | **0.89** |
| To talk to new and varied people | 2.8 (11) | 10.1 (39) | 31.7 (123) | 41.2 (160) | 14.2 (55) | 3.53 | 0.95 |
| To be with and observe other people using the area | 8.6 (33) | 21.1 (81) | 40.1 (154) | 22.1 (85) | 8.1 (31) | 3.00 | 1.04 |
| **Teaching-Leading Others** | - | - | - | - | - | **3.16** | **0.86** |
| To share what you have learned with others | 2.1 (8) | 10.1 (39) | 35.6 (137) | 33.5 (129) | 18.7 (72) | 3.56 | 0.97 |
| To lead other people | 11.8 (45) | 24.5 (93) | 45.5 (173) | 12.1 (46) | 6.1 (23) | 2.76 | 1.01 |
| **Achievement/Stimulation** | - | - | - | - | - | **3.05** | **0.85** |
| *To show others you can do it | 21.7 (83) | 25.9 (99) | 36.1 (138) | 13.1 (50) | 3.2 (12) | 2.50 | 1.06 |
| *To experience excitement | 2.8 (11) | 8.8 (34) | 28.7 (111) | 43.2 (167) | 16.5 (64) | 3.61 | 0.95 |
| *To test your endurance | 9.5 (37) | 21.0 (82) | 32.4 (126) | 27.8 (108) | 9.3 (36) | 3.06 | 1.11 |
| **Risk Reduction** | - | - | - | - | - | **2.83** | **0.51** |
| To be near others who could help if you need them | 13.0 (50) | 22.1 (85) | 43.3 (166) | 15.9 (61) | 5.7 (22) | 2.79 | 1.04 |
| To know that others are nearby | 15.8 (61) | 28.1 (108) | 37.1 (143) | 15.6 (60) | 3.4 (13) | 2.62 | 1.03 |
| To avoid the unexpected | 17.4 (67) | 28.9 (111) | 40.0 (154) | 10.6 (41) | 3.1 (12) | 2.53 | 0.99 |
| *To be sure of what will happen to you | 2.6 (10) | 13.5 (51) | 40.6 (154) | 26.9 (102) | 16.4 (62) | 3.40 | 0.99 |
| **Autonomy/Leadership** | - | - | - | - | - | **2.80** | **0.57** |
| *To be on my own | 5.6 (22) | 20.1 (78) | 32.4 (126) | 30.1 (117) | 11.8 (46) | 3.22 | 1.07 |
| *To feel my independence | 8.3 (32) | 12.9 (50) | 32.5 (126) | 33.1 (128) | 13.2 (51) | 3.29 | 1.10 |
| *To be in control of things that happen | 7.7 (30) | 27.5 (107) | 41.4 (161) | 14.1 (55) | 9.3 (36) | 2.89 | 1.04 |
| **Risk Taking** | - | - | - | - | - | **2.48** | **0.95** |
| *To take risks | 13.5 (52) | 26.0 (100) | 39.7 (153) | 17.4 (67) | 3.4 (13) | 2.71 | 1.01 |
| *To chance dangerous situations | 26.7 (103) | 31.1 (120) | 31.3 (121) | 9.1 (35) | 1.8 (7) | 2.28 | 1.01 |
| *To experience the risks involved | 22.3 (86) | 26.4 (102) | 34.7 (134) | 14.0 (54) | 2.6 (10) | 2.48 | 1.06 |

Note: *Asterisks denote measures used to create a composite index to determine adventuresomeness and risk-taking.
The REP scale ranged from 1 (Strongly Disagree) to 5 (Strongly Agree)

Table 2.2 highlights the study sample demographics. Among 403 respondents, 86% were US citizens and 14% were international visitors. Of all respondents, 41.2% were born between 1946 and 1955, while 58.8% were born between 1956 and 1964. While 53.6% of respondents were males, 46.4% were females. A majority of respondents (73.4%) stated that they were employed, while 26.6% stated they were not. Of those who work, 84% work full-time, while 16% work part-time. A majority of respondents (56.1%) did not have children living at home with them, while 43.9% of respondents did. The percentage of those who were repeat visitors was high at 48.8%, while first-time visitors accounted for 51.2%.

Table 2.2 Characteristics of a sample of baby boomer visitors at SEKI

| Item | N | % |
|---|---|---|
| Nationality | | |
| *US Citizen* | 345 | 86.0 |
| *Non-US Citizen* | 56 | 14.0 |
| Age Range | | |
| *Born 1946-1955* | 166 | 41.2 |
| *Born 1956-1964* | 237 | 58.8 |
| Gender | | |
| *Male* | 216 | 53.6 |
| *Female* | 187 | 46.4 |
| Employment | | |
| *Full or part time employment* | 295 | 73.4 |
| *Full- time employment* | 221 | - |
| *Part-time employment* | 42 | - |
| *No employment* | 107 | 26.6 |
| Past Visitation | | |
| *Previous visitor* | 196 | 48.8 |
| *First time* | 206 | 51.2 |
| Children living at home | | |
| *Yes* | 173 | 43.9 |
| *No* | 221 | 56.1 |

Most respondents participated in sightseeing while visiting (90.2%), scenic driving (87.8%) and day hiking or walking (84.8%). The activities that were the least participated in were horseback riding (11.1%), followed by overnight backpacking (16.5%) and fishing (18.1%; Table 2.3). The activities which ranked highest in importance by respondents were sightseeing, scenic driving and day hiking or walking (*M*=4.5 out of 5). Activities that respondents found unimportant were horseback riding (*M*=2.6), fishing (*M*=3.0) and overnight backpacking (*M*=3.0).

Table 2.3 Activities engaged in by respondents and their importance

| Activity | Did Participate % | Very Unimportant % | Unimportant % | Neutral % | Important % | Very Important % | *M* | SD |
|---|---|---|---|---|---|---|---|---|
| Sightseeing | 90.2 | 1.9 | 0.8 | 4.5 | 30.7 | 62.1 | 4.5 | 0.7 |
| Scenic driving | 87.8 | 1.3 | 0.6 | 8.0 | 31.7 | 58.4 | 4.5 | 0.7 |
| Day hiking or walking | 84.8 | 2.2 | 1.4 | 7.3 | 27.1 | 62.0 | 4.5 | 0.8 |
| Wildlife viewing/birdwatching | 77.2 | 2.5 | 1.9 | 14.9 | 31.9 | 48.8 | 4.2 | 0.9 |
| Picnicking | 52.6 | 5.3 | 3.8 | 21.1 | 43.0 | 26.8 | 3.8 | 1.0 |
| Camping in developed campground | 44.3 | 5.2 | 4.1 | 11.3 | 20.6 | 58.8 | 4.2 | 1.1 |
| Creative arts (photography/painting/ writing) | 40.1 | 7.0 | 11.1 | 20.4 | 34.5 | 27.0 | 3.6 | 1.1 |
| Swimming and other water activities | 35.1 | 5.3 | 8.1 | 29.0 | 33.8 | 23.8 | 3.6 | 1.0 |
| Cave tour | 33 | 5.3 | 6.7 | 34.6 | 33.7 | 19.7 | 3.5 | 1.0 |
| Overnight backpacking | 16.5 | 14.0 | 24.4 | 23.1 | 14.7 | 23.8 | 3.0 | 1.3 |
| Fishing | 18.1 | 17.2 | 17.9 | 24.5 | 23.8 | 16.6 | 3.0 | 1.3 |
| Horseback Riding | 11.1 | 22.9 | 20.4 | 32.5 | 14.6 | 9.6 | 2.6 | 1.2 |

Note: Respondents were given an option to state they did not participate in an activity for each of the activity categories. This table does not include the percentages of those who chose not to participate in a certain activity.

The one sample proportion test results which compared activities participated in by 2012 visitors to the respondents in the current study show that the proportion of baby boomers that participated in each of the activities except swimming (e.g., sightseeing, scenic driving, etc.) were significantly different from the proportion that participated in these activities in 2012 (Table 2.4).

Table 2.4 Comparison to 2012 study of activities

| Activity | *Current* Did Participate % | *2012* Did Participate % | p-value |
|---|---|---|---|
| Sightseeing (n=386 ) | 90.2 | 74.0 | <0.05 |
| Scenic driving (n= 385) | 87.8 | 78.0 | <0.01 |
| Day hiking or walking (n=388) | 84.8 | 78.0 | <0.01 |
| Wildlife viewing /birdwatching (n=377) | 77.2 | 38.0 | <0.01 |
| Picnicking | 52.6 | 42.0 | <0.01 |
| Camping in developed campground (n=348) | 44.3 | 39.0 | 0.05 |
| Creative arts (photography/painting/ writing) (n=347) | 40.1 | 19.0 | <0.01 |
| Swimming and other water activities (n=344) | 35.1 | 30.0 | 0.06 |
| Cave tour (n=336) | 33 | 16.0 | <0.01 |
| Fishing (n=338) | 18.1 | 3.0 | <0.01 |
| Overnight Backpacking (n=333) | 16.5 | 9.0 | <0.01 |
| Horseback Riding (n=341) | 11.1 | 2.0 | <0.01 |

Note: †2012 study n = 459 groups

Several questions were asked of respondents to find out how they view themselves, as well as their interest in outdoor activities with regard to the time needed to

devote to the activities they choose and the results are shown in Table 2.5. A majority (92.3%) of respondents agree or strongly agree that they prefer to participate in outdoor activities. When asked if respondents have sufficient time to devote to the activities they choose, 73.8% agreed or strongly agreed. A majority (90%) of respondents considered themselves to be healthy, while 86.2% considered themselves to be active.

Table 2.5 Respondents' feelings toward activity and health

| Item | Strongly Disagree % (n) | Disagree % (n) | Neutral % (n) | Agree % (n) | Strongly Agree % (n) |
|---|---|---|---|---|---|
| You prefer to participate in outdoor activities. | 0.5 (2) | 0.5 (2) | 6.7 (26) | 30.8 (120) | 61.5 (240) |
| You consider yourself healthy. | 0.5 (2) | 0.7 (3) | 8.8 (35) | 48.6 (194) | 41.4 (165) |
| You consider yourself active. | 0.3 (1) | 1.0 (4) | 12.5 (50) | 47.4 (189) | 38.8 (155) |
| You have sufficient time to devote to the activities you choose. | 0.3 (1) | 8.5 (33) | 17.5 (68) | 42.4 (165) | 31.3 (122) |

The questionnaire asked respondents to indicate agreement with statements measuring their self-perceptions of adventuresomeness and risk-seeking using a 5-point Likert scale, which ranged from 1 ("strongly disagree") to 5 ("strongly agree"). The mean response for 'You consider yourself adventurous' was 3.9 (SD= 0.8). An overwhelming majority of respondents self-identified as adventurous (73.8%). The mean response to the statement 'You enjoy activities that involve an element of risk' was 3.21 (SD= 1.0). Those who enjoy activities that involve an element of risk made up 40.2% of respondents.

Based on the linear regression analyses, baby boomer age is not a significant predictor of risk and adventure as motivations for visiting SEKI ($\beta = 1955.77$, $R^2 = 0.001$, $F = 0.262$, $p = 0.609$).

The proportion of those engaged in activities or not who had children living at home with them were compared to the proportion of those were engaged in activities or not who did not have children living at home with them; none of the two-sample proportion tests regarding having children at home or not were found to be significant when using the corrected p-value. Having children at home or not does not seem to be related to which outdoor activities baby boomers participate in.

The proportion of those engaged in activities or not who were employed or not were compared to the proportion of those who were not engaged in activities; none of these two-sample proportion tests were found to be significant when using the corrected p-value. Being employed or not does not seem to be related to which outdoor activities baby boomers participate in.

The mean self-perceived activeness and health values for those that are engaged in an activity was compared to the mean self-perceived activeness and health values for those that are not engaged in an activity. Those baby boomers who self-identify as active tend to engage in 'Camping in developed campground ($p = .003$), 'Day hiking or walking' ($p = .001$) and 'Wildlife viewing/birdwatching' ($p = <.001$) (Table 2.6).

Table 2.6 Average health and activity level of respondents by activity engagement.

| | Health | | | Self-perceived Activeness | | |
|---|---|---|---|---|---|---|
| | Not Engaged *M (SD)* | Engaged *M (SD)* | *p* | Not Engaged *M (SD)* | Engaged *M (SD)* | *p* |
| Camping in developed campground | 4.22 (0.73) | 4.37 (0.65) | 0.036 | 4.13 (0.75) | 4.34 (0.67) | <0.01* |
| Picnicking | 4.28 (0.73) | 4.30 (0.68) | 0.85 | 4.24 (0.74) | 4.23 (0.71) | 0.86 |
| Cave Tour | 4.28 (0.73) | 4.30 (0.66) | 0.69 | 4.20 (0.74) | 4.26 (0.70) | 0.38 |
| Horseback Riding | 4.25 (0.74) | 4.35 (0.63) | 0.14 | 4.17 (0.74) | 4.32 (0.67) | 0.04 |
| Creative arts (photography/painting/ writing) | 4.29 (0.74) | 4.29 0.66) | 0.93 | 4.24 (0.77) | 4.23 (0.68) | 0.88 |
| Fishing | 4.28 (0.72) | 4.31 (0.65) | 0.73 | 4.19 (0.76) | 4.30 (0.65) | 0.13 |
| Day hiking or walking | 4.06 (0.80) | 4.31 (0.68) | 0.04 | 3.83 (0.86) | 4.26 (0.70) | <0.01* |
| Scenic driving | 4.15 (1.04) | 4.30 (0.67) | 0.28 | 4.26 (0.87) | 4.23 (0.71) | 0.80 |
| Swimming and other water activities | 4.25 (0.74) | 4.33 (0.65) | 0.24 | 4.16 (0.78) | 4.30 (0.65) | 0.06 |
| Sightseeing | 4.20 (0.86) | 4.30 (0.68) | 0.48 | 4.26 (0.77) | 4.23 (0.71) | 0.80 |
| Wildlife viewing/birdwatching | 4.02 (0.83) | 4.32 (0.67) | 0.010 | 3.85 (0.92) | 4.27 (0.68) | <.01* |

Note*:* * denotes significance at the Bonferroni-corrected p<.004 level.

## Discussion and Conclusions

This study sought to examine baby boomers at SEKI and gauge their interest in outdoor activities. It examined recreational motivations for visiting SEKI, activity desires, and interest in passive, risky, and also adventurous activities. The study found that a majority of baby boomers prefer to participate in outdoor activities in SEKI. They consider themselves to be healthy, as well as active. These are substantial findings when compared with the sizeable earlier literature which suggested a decline in participation in outdoor activities for older people. The results from this study seem to be bolstering more recent findings stating that older adults are becoming more likely to engage in more active and adventurous activities (Cater, 2000; Lipscombe, 1995; Muller & Cleaver, 2000). There seems to be somewhat of a reversal of the historical literature, which stated that as adults become older they shift from active to more passive forms of recreation, decline in participation, and move from outdoor to indoor activities (Kelly, 1980).

A main goal of this research was to determine what activities baby boomers are participating in when they visit a national park. A comparison of results to the 2012 study of general visitors to SEKI found that baby boomers are in fact very active visitors. The present study used the same activity choices as did the 2012 study, allowing for a comparison of results. In some cases, baby boomers were substantially more involved in some activities. Also, they seek out adventure activities, such as backpacking. Overnight backpacking was participated in at a level of over five times the 2012 level (16.5% versus 3%). Horseback riding participation was also at a level of five times the 2012 level (11.1% versus 2%). A large difference in wildlife viewing/birdwatching was found

(77.2% in present study versus 38% in 2012 study). Cave tour participation was more than double the 2012 level (33% versus 16%). Participation in creative arts (photography/painting/writing) was more than double the 2012 level (40.1% versus 19%). And, fishing was more than double the 2012 level (18.1% versus 9%). Baby boomer visitors in the present study chose to participate in day hiking or walking at a rate of 84.8%, versus a rate of 78% in the 2012 study. Scenic driving was also higher (87.8%) than was the 2012 study (78%). There was a considerable difference in participation in sightseeing in the present study (90.2%) versus the 2012 study (74%). Picnicking participation was 52.6 %, while the 2012 study found participation to be 42%. More respondents camped in a developed campground in 2014 (44.3% versus 39% in 2012). It can be seen from the comparison of these two studies that baby boomers participate in outdoor activities at a much higher level than the average park visitors. Parks can choose to prepare for older visitors who will participate in potentially dangerous activities in national parks. Further, managers and interpreters will be able to integrate this knowledge into signage and media materials to better prepare baby boomer visitors.

A second major goal of this research was to determine whether life events and health measures were related to activity selection. According to the proportion tests conducted to examine life events, none were found to be significant. Therefore, having children living at home or not was not found to be related to which activities baby boomers participate in. Also, being employed or not being employed did not affect the activities which respondents engage in while visiting SEKI. In terms of the relation to

self-perceived activeness, the t-tests that were conducted found that those who perceived themselves as being active were apt to camp in a developed campground, go day hiking or walking, and engage in wildlife viewing/birdwatching. This prioritization of activities will allow park managers to see where their resources should be devoted.

The final goal of this research was to determine if desire for adventure and risk for baby boomers in a national park was related to age. While the descriptive statistics did show that respondents perceived themselves as adventurous, the linear regression did not show a relationship between adventure/risk and age. This corroborates the descriptive statistics results from the REP items. Seemingly, baby boomers perceive themselves as more adventurous when that general term is used. However, when more probing, direct statements are offered (i.e., To chance dangerous situations) the respondents answered more cautiously. An effort by park managers to warn older visitors of the inherent risks associated with outdoor activities in national parks may be needed.

In examining results from questions asked early in the survey, a high percentage of visitors self-identified as being adventurous. Also, nearly half of visitors stated they enjoy activities that involve risk. Regarding the high self-identification with adventure, this adds to the literature and specifically the results from the AARP-commissioned study discussed earlier (Davies, 2005). In that study, 55% of respondents considered themselves to be adventurous, while it was nearly 74% in the current study. The REP questions delved into these topics in more detail, where respondents were asked how much they associated with specific statements regarding risk and adventure. The

responses from these statements differed substantially from former results. For example, when the statement involving risk was offered ('to take risks'), a majority of respondents stated their disagreement with the statement. Perhaps baby boomers associate general definitions of risk and adventure with being youthful, but when specific, more real and candid statements are given, their defenses mount and they reply with more caution.

Perhaps national parks may even become destinations for baby boomers who are seeking to do difficult, endurance activities. Ultra-marathoners (those running further than 26.2 miles) tend to do their first ultra-marathon later in life (average age of 36) (Hoffman & Krishnan, 2013). The mean age of runners attempting the Badwater Ultramarathon held in Death Valley National Park was 46 (AdventureCORPS, 2013). Also, rim-to-rim and extended day hiking and running have increased so much in popularity at Grand Canyon National Park that an interim permit system has recently been instituted (NPS, 2015a). Future research could be geared at these 'bucket-list' types of endurance events to see how many baby boomers are traveling to national parks solely for this reason. 'Becoming sedentary' is now an outdated way to look at those edging towards 50 years of age. It is apparent from the sheer number of baby boomers interested in outdoor activities, especially the number interested in some of the more adventurous activities at SEKI that an active life now does not end as people turn 50 or even 60.

This study also added to literature findings which state that baby boomers enjoy continuing to learn (Cleaver & Muller, 2002; Lipscombe, 1995; Muller & Cleaver, 2000). The 'Learning' motivational domain of the REP was one of the highest mean domain scores of the study, second only to 'Enjoy Nature'. Parks are able to provide intriguing

locations for baby boomers to visit, as they not only provide exceptional recreational opportunities, but also provide dynamic interpretive functions, including ranger-led talks and educational films which further educate visitors on the resources contained within each area. Future research could examine the potential differences in learning desires between the leading-edge and trailing-edge baby boomers, as the baby boomer age range spans eighteen years and there are likely differences in many areas.

Some study limitations exist as part of this study, as does with all research. People are self-selecting to go to a national park, and this study focused on those who chose to visit SEKI. However, the study does provide a sample of baby boomers within a park setting (which should not be transferred to all members of the baby boomer cohort). Also, the time of year this study took place does cause for a lack of input from visitors who come to SEKI in the other months of the year to do differing activities, such as skiing and snowshoeing. Future research could study winter activities and also those on the separate cusps of the baby boomer cohort (leading edge, trailing edge).

Some interpretation functions may need to be changed due to the large visitorship of baby boomers in national parks. A major finding of this study was that, when compared to the 2012 VSP study of visitors to SEKI, baby boomers are engaging in outdoor activities at much higher rates. Perhaps increasing the level of available resources and staffing could assist parks in welcoming this active cohort. There may be a need for changes to existing signage to help better prepare adventure-seeking older travelers. For example, information and education of inherent risks associated with popular, adventurous activities may be needed. Further, educational interpretation may

not currently be geared toward the baby boomer age group in national parks. Perhaps a concerted effort to educate this cohort could take place. Parks could choose to offer more information on wildlife watching, as this was found to be enjoyed by a large majority. Baby boomers seem to be more active when they visit a national park and less passive. Parks could develop innovative ways to assist baby boomer visitors to choose which activities to participate in, and at what levels. For instance, a park could allow a visitor to choose their own adventure, taking into account variables such as physical ability and the duration of time desired.

Managers and park staff should be ready for an increased number of older visitors, whether they operate federal, state, or local parks. The country is aging, baby boomers have an abundance of free time, a yearning for knowledge, and a desire to visit places of natural beauty. Baby boomers' desires and activities are unique as compared to typical park visitors, and they will expect that the places they frequent and enjoy are relevant to them. Park managers have an opportunity to foster a deliberate relationship with this sizable visitor group by providing and helping older visitors select desirable outdoor recreation activities. Baby boomers enjoy many activities that were once viewed as for 'young' people only. They seem to pride themselves on throwing the notion of them being 'old' out the window. Baby boomers seek out activities they think will help them to remain young, and it seems as if they have found them in parks.

# CHAPTER 4

# TRANSPORTATION MODE CHOICE AMONG BABY BOOMER VISITORS IN NATIONAL PARKS: EXPLORING THE CONCEPT OF FREEDOM

Managing automobile traffic is a large concern for the U.S. National Park Service (NPS). As early as 1920, NPS director Stephen Mather wrote of the need for more and better roads as one of the most important issues the NPS faced (Hall, 1921). Nearly 283 million visits to NPS units occur annually (NPS, 2013a) and the automobile is the primary means of transportation to and through most national parks (Hallo & Manning, 2009; Manning, Lawson, Newman, Hallo, & Monz, 2014b). This is one reason the NPS has, and continues to look to Alternative Transportation Systems (ATS). Many national parks are implementing ATS in the form of shuttle buses to relieve the parks of traffic congestion. There are now 147 ATS in 72 park units across the nation (NPS, 2014b).

Shuttle buses have been implemented in national parks such as Acadia and Glacier to mitigate congestion and other problems resulting from high private vehicle usage. The benefits of shuttle bus ridership are numerous (Mace, Marquit, & Bates, 2013) with potentially drastic reductions in levels of automobile traffic, crowding, and air pollution. Denali National Park went so far as to ban private vehicles from entering the interior of the park in 1972 (Harrison, 1975; Mace et al., 2013). The park's mandatory shuttle system continues to report positive experiences, with visitors stating that their visit had been enhanced as a result of the ability to see more of the park (Mace et al., 2013; Manning & Hallo, 2010; Miller & Wright, 1999).

Automobile use dominates the way people move inside and outside cities (Grava,

2003). Thus, the challenge in national parks and elsewhere is how to transition from automobile usage to ATS. National park visitors have a long history of traveling to and within national parks by vehicle; a major part of the experience of visiting a park is driving through it (Hallo & Manning, 2009; Manning, Lawson, Newman, Hallo, & Monz, 2014a; Turnbull, 2003). For example, driving for pleasure within Acadia National Park was found to be important for a majority of survey respondents (Hallo & Manning, 2009). Further, personal vehicle use played an important role in the development of many parks. The Blue Ridge Parkway was conceived and designed "as a linear park containing a road meant for pleasure driving and scenic appreciation" (Myers, 2006, p. 38). Going-to-the-Sun Road, which bisects Glacier National Park is in fact a U.S. National Historic Landmark (NPS, 2013b).

A related problem is that the average park visitor is older, and older visitors tend not to ride shuttle buses as frequently as do younger visitors. In Rocky Mountain National Park a relatively higher preference was found for visitors age 40 and over for driving personal vehicles when compared to riding shuttle buses (Pettebone, Newman, Lawson, Hunt, Monz, & Zwiefka, 2011). Also, elderly or disabled visitors may find it difficult to use public transportation as compared to personal vehicles (Holly, Hallo, Baldwin, & Mainella, 2010). Finally, older visitors to Sequoia and Kings Canyon National Parks were found to be much less interested in a mandatory park shuttle when compared with an optional one (Dilworth, 2003).

Freedom is a highly valued attribute in U.S. society. The importance of perceived freedom should therefore not be devalued, as it is a defining characteristic of leisure

(Neulinger, 1981). A major reason that some visitors do not ride shuttle buses in parks is due to a perceived loss of freedom (Dilworth, 2003; Manning & Hallo, 2010; Sims, Hodges, Fly, & Stephens, 2005; Taff et al., 2013; White, 2007). Maintaining individual freedom was the most important factor for visitors to Acadia National Park when considering whether or not to ride the shuttle bus there (Holly et al., 2010). Also, visitors riding ATS in Yosemite and Rocky Mountain National Parks expressed a desire to experience a sense of freedom while at both parks (Taff et al., 2013).

A sense of freedom may be related to increased age. The freedom to drive a personal vehicle while visiting a national park could be due to the autonomy that a vehicle brings. Perhaps there are reasons related to maintaining autonomy, such as declining physical health or physical disability, for older travelers to use private vehicles more so in national parks. The use of an automobile provides high levels of independence, especially for the elderly. Automobiles allow older persons to continue on with their lives by fulfilling their needs to shop, attend religious services, and continue living in their own homes. The revocation of a driver's license typically results in a loss of freedom, loss of social contact, and a significant reduction in activities (Fain, 2003).

The purpose of this study was to find what factors are inhibiting ridership among older park visitors. Specifically, people born between 1946 and 1964, termed the baby boomer cohort, were the focus of this study. The concept of transportation freedom as related to this age group was examined. Also, specific aspects of freedom that may be preventing more baby boomers from using buses was explored. Perhaps buses or services can be changed to better promote a sense of freedom and to promote ridership by

the baby boomer generation in national parks. This may be accomplished by deliberate consideration of transportation design and technology integration.

A reason baby boomers may not ride as frequently as younger riders is a lack of balance between old and new in terms of bus design. Experiencing a feel of nostalgia, one rooted deep in culture and history may be needed. The historic elements of national parks, including motorcoaches are revered by visitors (Daigle, 2008; Turnbull, 2003). Integration of character traits from these historic coaches when designing new buses could assist in capturing future baby boomer riders (White, 2007). In terms of integrating more new elements, to step down off a bus can be difficult for some older riders. Low buses, handrails, and different bus door designs that integrate handrails may be needed by older visitors.

Wide-spread use of technology deemed to be relevant and desired by visitors could also influence ridership by baby boomers. In Acadia, real-time parking information, along with real-time bus departure displays converged to increase visitor use of the park's shuttle bus (Daigle & Zimmerman, 2004). For older visitors, perhaps there may be an influence on transportation mode choice by the integration of technology. Baby boomers seek to learn new things when traveling (Cleaver & Muller, 2002). Perhaps on-shuttle education and interpretation functions could serve to influence ridership by this generation.

## Research Questions

1) What mode of travel are baby boomers using in a national park? Are they willing to change their mode?

2) What influences transportation mode choice among baby boomer visitors in a national park?

3) What specific factors are inhibiting shuttle bus ridership?

4) How can buses or services be changed to better promote a sense of freedom and increase shuttle ridership by the baby boomer generation in national parks?

## Literature Review

### *Baby Boomers*

The baby boomer generational cohort is comprised of those born between 1946 and 1964. The baby boomer generation came about as a result of the increased social and economic prosperity of the post-World War II era (Cleaver & Muller, 2002). According to the U.S. Census Bureau (2015) there are 75 million baby boomers in the United States. The U.S. population is projected to become older in the coming decades largely as a result of the sheer number of baby boomers. The aging of the baby boomers is expected to increase the median age of the U.S. population from 36 to 39 by 2040 and increase the percentage of older adults from 12 to over 20 percent (Kinsella & He, 2009). The first of the baby boomers reached age 65 in 2011. By 2050, the number of Americans aged 65

and older is projected to double to 88.5 million (Vincent & Velkoff, 2010).

The large baby boomer group is sometimes divided into two sub-cohorts. The first group can be referred to as Boomers I or leading-edge boomers and were born between 1946 and 1954. The Boomers II cohort or trailing-edge boomers were born between 1955 and 1964 (Schewe, Meredith, & Noble, 2000). The first group witnessed events such as the assassination of President John F. Kennedy and Martin Luther King, Jr., and also watched the first man walk on the moon. The second cohort saw the fall of South Vietnam, Watergate and President Richard Nixon's resignation.

Baby boomers visit national parks in earnest and the group may continue visiting for some time to come (Nagourney, 2013). Baby boomers were exposed to a unique set of life events which may make the cohort distinct from others. Just as the first baby boomers were born in 1946, the states of the U.S. were proposing routes for the Interstate Highway System that would succeed in getting people to national parks faster than ever before, courtesy of their private cars (Weber, 2012). Widespread post-war affluence allowed for pervasive automobile use and the time needed to partake in leisure.

Baby boomers have an abundance of leisure time and fewer social and family obligations as compared to younger people (Higgs & Quirk, 2007; Tate, Mein, Freeman, & Maguire, 2006). Dora Costa in her book *The Evolution of Retirement* argues that retired persons have become the true leisured class. When asked about life goals, about half of all baby boomers expressed that they wish to travel and explore the world (Focalyst, 2007b). A study from the consumer research firm Scarborough Research (2012) reveals that baby boomers are spending their time engaging in cultural or

educational pastimes as well. Over the course of a year, baby boomers attended a professional sporting event (36%), attended live theater (22%), visited an art museum (14%), attended a rock concert (12%) and went to the symphony or opera (9%).

Baby boomers have been described as a lucky and privileged cohort (Roberts, 2012). Baby boomers grew up in prosperous times relative to those born before 1946. The 1950s and early 1960s were decades of exceptional economic growth (Light, 1988). Baby boomers were able to enter the job market at a time when there was full employment and middle-class jobs were increasing rapidly (Roberts, 2012). This group stands to inherit some $10.4 trillion in stock market gains and real estate assets, which will allow for increased travel (Howe, McMahon, & Propst, 1997).

*Aging in parks, tourism, and transportation*

Americans are living longer than ever before. On average, life expectancy has increased by 2.5 years per decade for the past 160 years. Since 1950 the number of people celebrating their 100$^{th}$ birthday has doubled each decade (Vaupel & Kistowski, 2005). In 1935, the typical 65-year-old could expect to live approximately 4.5 more years in the U.S. In 2015, the typical 65-year-old can expect to live another 19.4 years (Social Security Administration, 2015). By 1970, the average life expectancy at birth was 70.8 years; in 2008, it had risen to 78.0 years (National Institute on Aging, 2013). It is projected that life expectancy will reach 79.5 years by 2020 (U.S. Census Bureau, 2013). America now possesses not only the largest and fastest-growing population of older adults in history but also the healthiest, most vigorous, and best educated

(Freedman, 1999).

Older Americans use their personal vehicles 89% of the time when travelling according to the 2001 national household travel survey (Collia, Sharp, & Giesbrecht, 2003). Older adults tend to be less mobile in their trip behavior in that they take fewer trips, travel shorter distances, and travel for shorter times. Also, older men and women take long-distance trips at about the same rates and show a strong preference for using personal vehicles. For men and women who have to give up driving, alternative means of transportation become a necessity. Yet overall use of alternative transportation is relatively low, accounting for about 2% of daily travel (Collia et al., 2003).

Urban public transport has been shown to be supported more by older adults (Gilhooly, Hamilton, O'Neill, Gow, Webster, Pike, & Bainbridge, 2002). This runs counter to the literature on public transport use by older adults in the national parks which states that older adults would rather drive their personal vehicles (Pettebone et al., 2011). A number of barriers to the use of public transport have been identified for older adults, including concerns about personal safety at night, difficulties carrying heavy loads, public transport running late, the behavior of some passengers, poor cleanliness, and a lack of toilets (Gilhooly et al., 2002). While bus travel is not the most popular mode of transportation for taking pleasure trips, it has been found to increase in importance as a person ages (Javalgi, Thomas, & Rao, 1992).

Business operators worldwide are becoming increasingly aware of the significant impact that older adults are having on the tourism industry (Paxson & Case, 2009). As a direct consequence of global aging patterns, senior travelers will increasingly account for

a larger share of vacation spending on a global scale (Littrell, Paige, & Song, 2004; Sangpikul, 2008). Today's older travelers are healthier, wealthier, better educated, and more independent than younger people, and they have an abundance of leisure time and fewer social and family obligations (Higgs & Quirk, 2007; Tate et al., 2006). In *The Future of America's National Parks*, a report to the President of the U.S. by the Secretary of the Interior, national parks were told to prepare for a larger, older, and more diverse population (Kempthorne, 2007). The retirement of the baby boom generation will create more time for them to visit national parks.

*Aging and leisure habits*

Increased age typically corresponds with a decrease in participation in outdoor recreation, despite the abundance of free time older people generally have (Agahi, Ahacic, & Parker, 2006). Four general changes in leisure behavior are thought to occur as people age: a) decline in participation, b) shifting from active to more passive leisure, c) shifting from outdoor leisure to indoor activities, and d) decline in the search for novelty (Nimrod & Janke, 2012). Visitors to natural outdoor recreation areas, such as national forests, national parks, and wilderness, tend to be young to middle-age and of relatively high socioeconomic status as defined by income, occupation, and especially education (Cole, 1995; Manning, 2011). Also, a historic, large-scale analysis of a nationwide survey of recreation participation found age to be strongly and inversely related to those recreation activities that require physical strength and endurance (Kelly,

1980). However, in 1987 the President's Commission on American Outdoors reported that the average age of outdoor enthusiasts was steadily climbing.

*National parks and transportation*

Mount Rainier National Park, founded in 1899 in part due to its close proximity to the metropolises of Seattle and Tacoma, was among the first in the nation to construct roads deep into the heart of a national park so that tourists could drive high into the mountains without leaving the comfort of their cars (Louter, 2006). Early national parks supporters believed that to create backers for the park idea, people needed to have access (Havlick, 2002; Runte, 2010). The automobile quickly became a part of the national park experience, due in part to its ability to provide freedom and its affordability (Percival, 1999). By 1919, nearly 98 thousand automobiles had driven through the national parks (Runte, 2010). In fact, automobiles in parks proved to be so popular that the concept for a national park-to-park highway linking the national parks was presented to Congress in the NPS Annual Report of 1920 (Percival, 1999).

Roads built in the parks were thought of as constructions that enabled people to know primeval nature better (Louter, 2006). This required thinking of parks as best seen from and experienced through a car. Roads were routed like paths in a garden, and effectively 'produced' the area we know as a national park (Louter, 2006). Eventually, better roads and growing cities in the western U.S. made many western national parks almost as easy to reach as eastern parks. Urbanization and transportation patterns after World War II made the national park system even more accessible (Carr, 2007).

Mission 66 was the largest park development initiative in history, begun in 1953 to expand the roads, campgrounds, visitor centers, utilities, employee housing, and overnight accommodations in the national parks (Keiter, 2013; Runte, 2010). Mission 66 efforts produced almost 1,200 miles of new roads alone, with numerous other developments, including visitor centers (Barringer, 2002). Visitation to the parks shot up in the 1950s and 1960s partly as a result of the ending of World War II, and the large baby boomer population (Keiter, 2013). By 1955 more than 60 million motor vehicles were registered in the United States, a figure twice as large as in 1945 (Carr, 2007). Also by 1955, annual visitation to the national parks had grown to over 56 million, compared with just 17 million visitors in 1940, before the start of World War II. Specifically, visitation to Sequoia & Kings Canyon rose from 876,000 annual visitors in 1946 to more than 1.7 million in 1966 (NPS, 2014a).

*Mode choice and freedom*

The NPS has looked to Alternative Transportation Systems (ATS) to provide visitors access to the national parks in a manner that potentially reduces traffic congestion, enhances visitors' experiences, reduces noise levels, improves air quality, accommodates increasing visitor demands and more effectively protects park resources (Freitas, 1999; Manning et al., 2014a; Pettebone et al., 2011; Turnbull, 2003). The NPS ATS program was launched in 1998 and is responsible for coordinating policies, projects, and activities related to planning and implementing ATS within and to national park system units (Daigle, 2008). Denali National Park was the first NPS unit to have an

ATS, a shuttle bus that began in 1972 (Singer & Beattie, 1986). This system has been successful, with ridership increasing quickly in its first few years of use (Harrison, 1975).

It has been found that while visitors are supportive of voluntary shuttle bus services, they are less supportive of mandatory shuttle services because of a perceived loss of freedom when using these services (Dilworth, 2003; Miller & Wright, 1999; Sims et al., 2005). For instance, the elderly, disabled, and those carrying large amounts of bulky equipment or cargo can be displaced (Holly et al., 2010). In Yosemite, those who preferred to use their own car instead of taking the shuttle felt it provided them greater freedom (White, 2007). Also, Taff et al. (2013) found that "ease," "freedom," and "stress" are important factors for park managers to consider when determining indicators and standards of quality for ATS.

Older visitors are generally shown to be less likely to accept ATS and prefer to use private vehicles instead of shuttle buses (Dilworth, 2003; Moscardo, Pearce, & Morrison, 2001; Prideaux et al., 2001). Specifically, Pettebone et al. (2011) undertook a survey of visitors to Rocky Mountain National Park and found that older visitors were more inclined to drive personal vehicles. Visitors in the 40-59 year old age group preferred to drive their personal vehicles versus riding the shuttle bus in Rocky Mountain. Also, a study of travelers in Queensland, Australia showed that older travelers motivated by differing activities and travel destinations chose to use personal vehicles over other forms of transit (Moscardo et al., 2001).

A 2005 study of visitors to the Yosemite Valley area of Yosemite National Park (mean age of 45 years) found some of the benefits of using private vehicles to be

convenience, freedom, control, and opportunities for unique access (White, 2007). Convenience was found to be a recurring theme, and was mentioned by nearly all respondents when talking about their cars. Many of the overnight visitors were laden with suitcases or camping gear. The second theme, freedom, showed that visitors valued private vehicles for providing a sense of personal freedom to maintain a fluid schedule during their trip. When asked about costs or disadvantages of using private vehicles in Yosemite Valley, respondents frequently said that personal transportation brought the hassles of "traffic," "crowding," "parking," and "getting lost." (White, 2007). Yosemite has experienced declining visitation since its peak years in the mid-1990s. Many stakeholders were interviewed in response to this and attributed the decline in visitation to negative media messages about traffic in Yosemite (Dunning, 2005).

A separate study on transportation in Yosemite confirms an enduring reliance on the use of private automobiles as the primary transportation mode to enter and travel through the park. Nearly 90% of visitors studied entered the park in their private vehicles even though a shuttle service offers access from gateway communities. The study does provide evidence, however, that visitors are using the Yosemite Shuttle in significant numbers (>60%) once inside the park. Visitors with prior experience using alternative transportation expressed more positive attitudes, perhaps meaning that as visitors become more familiar with buses, attitudes could improve (White, 2011).

A study of visitor perceptions of ATS in Sequoia-Kings Canyon (SEKI) National Parks (also in California) was conducted and corroborates how visitor age is linked to transportation mode choice (Dilworth, 2003). Visitors (mean age of 49 years), when

compared to visitors at an urban park (Golden Gate), perceived ATS as less appropriate in SEKI, a large, rural park. Further, older visitors were found to be less likely to use technology in SEKI, while younger visitors at Golden Gate enjoyed the introduction of technology to ATS.

Perceived freedom has been defined as "a state in which the person feels that what she or he is doing is done by choice and because one wants to do it" (Neulinger, 1981, p. 15). Perceived freedom has been equated with free choice in the leisure literature, suggesting that to have leisure people must perceive that the social setting has more than one option to consider (Kleiber, Walker, & Mannell, 2011). The need to feel autonomous, therefore free to initiate one's behavior through personal choice and control is an important need for a person's well-being (Deci & Ryan, 1991). Freedom is an important attribute of the principle of autonomy, the need to feel free and independent (Schneider & Sar, 1999).

## Methods

### *Study Area*

Sequoia National Park was created by Congress in 1890 as the nation's second national park (Runte, 2010). Kings Canyon National Park was created in 1940. In 1943 the parks were merged under one superintendent as a cost-saving war-time measure (Tweed, 2000). Sequoia and Kings Canyon National Parks (SEKI) cover the greatest elevation range (1,370-14,495 feet) of any protected area within the lower 48 contiguous

states (Tweed, 2000). SEKI contains active glaciers and thousands of lakes. Mount Whitney, at 14,495 feet is the highest point in the contiguous U.S. and is contained within SEKI. The General Sherman tree is the largest tree on the planet, and calls SEKI home. Together, the parks protect 864, 383 acres and contain over 700 miles of trails (Palmer, 2002; Tweed, 2000). Over 90 percent of SEKI is designated wilderness (Tweed, 2000). In 2013, nearly 1.5 million people visited SEKI (NPS, 2014a).

The Department of the Interior allowed the first automobile to enter Sequoia in 1913 (Soulliére, 1995). By 1988, 660,000 vehicles traveled its park roads (Palmer, 2002). Eventually, parking congestion necessitated the introduction of a shuttle bus. In May 2007, the free Sequoia Shuttle began operating in the Giant Forest area of SEKI, and has since expanded (Sequoia & Kings Canyon National Park, 2014). Shuttles run seven days a week, generally from Memorial Day through Labor Day weekends. The shuttle buses travel from Dorst Camground near the park's northern entrance to Moro Rock, which is the most southerly stop, covering approximately 14 miles one-way. The major visitor destinations are served by the buses, including Sherman Tree and Moro Rock. There is also a shuttle service which runs from the gateway community of Visalia; a round-trip ride costs $15 and includes the park entrance fee.

*Data Collection*

The Institutional Review Board (IRB) of Clemson University and SEKI granted approval (via research permit) for this study. Experts were asked to review the interview script, and did so prior to data collection. The experts consisted of four faculty members

of Clemson University, the Research Coordinator at SEKI, as well as the Superintendent of SEKI. Data collection occurred over four weeks in July-August of 2014 to coincide with the peak visitor use season in SEKI. Semi-structured interviews were used to gather data to study the freedom aspects of transportation in SEKI. Specifically, semi-structured interviews using a modified Seidman Method (Seidman, 2006) were conducted with visitors at visitor centers and at Sequoia Shuttle bus stops. The Seidman Method states that questions should begin with those that are easy to answer to develop rapport and then lead into more substantive and reflective questions. Semi-structured interviews use a core set of pre-determined questions, but clarifying or exploratory questions can also be asked. This method allowed for a deeper understanding of what factors are important to visitors in regard to the shuttle bus.

Visitors who appeared to be waiting or otherwise not currently engaged in activities were asked to complete an interview. Only visitors born between 1946 and 1964 (i.e., from the baby boomer cohort) were allowed to participate in the interviews. Because of this, results were able to be inferred from the study sample to baby boomer visitors to national parks. Interviews began with easy-to-answer questions such as place of residence and number of previous visits to SEKI to build rapport. Later questions focused on the freedom-related factors inhibiting ridership. These questions included "What would encourage you to stop driving your car and ride the Sequoia Shuttle?" and "What does the concept of freedom mean to you when you think about traveling in SEKI?", What creates a sense of transportation freedom?", and "What detracts from a sense of transportation freedom?" The interview process continued until new

information ceased emerging and additional data did not reveal new insights. This is a point where data saturation is achieved; prior studies of similar nature have found this to be approximately 40 interviews (Hallo & Manning, 2009; Holly et al., 2010). In this study, data collection ended after 35 interviews because data saturation was achieved. The interviews were digitally recorded and later transcribed verbatim and transferred to a data management program.

*Analysis*

A content analysis of the transcripts was performed. This method of analysis allows for the transcribed text to be searched for recurring words or themes, termed codes (Patton, 2002). Coding is the process of segmenting data into general categories that may be used to expand and bring out new questions and levels of interpretation (Coffey & Atkinson, 1996). The collected qualitative data were first coded using inductive open coding (Creswell, 2007) to find the reasons for non-ridership of the Sequoia Shuttle related to freedom.

Next, pattern coding took place to organize the separate codes into broad themes (Miles & Huberman, 1994). This was performed to identify the most important factors impacting decisions to ride or not ride the shuttle bus. Iterative internal check-coding took place to agree upon the codes and extract a more contextual understanding of emerging freedom themes via revising, merging, and grouping codes (Miles & Huberman, 1994). Any text coded as miscellaneous, providing no meaningful data related to the study's intent, was excluded from analysis.

Several checks recommended by Miles & Huberman (1994) were instituted to ensure quality and validity. The researcher conducted all interviews, and transcribed and coded the text. Memos were kept throughout the data collection period and were compared with the data. Also, the researcher remained on-site and became familiar with the two parks and the shuttle system. Respondents were intercepted at six locations in SEKI, including the visitor centers and shuttle stops. The interviews lasted approximately ten minutes each. Over 135 pages of transcribed text were produced from the interviews.

After coding ten interviews, the first four were re-coded to verify reliability. The intra-rater reliability percentage agreement was calculated, and was found to be 95.0% (Miles & Huberman, 1994). An expert in the study of qualitative methods at Clemson University reviewed the analysis, and an inter-rater reliability index was constructed. The inter-rater reliability percentage agreement was 92.5% and corrections were made as needed (Miles & Huberman, 1994).

## Results

Thirty-five interviews were conducted with baby boomer park visitors. Of the 35 respondents, 24 stated that this was their first visit to SEKI, while 11 were repeat visitors. One respondent noted this was also his first visit to America. Approximately 15 percent of respondents were international, with the remaining 85 percent from the U.S. A majority of respondents were travelling as part of a group. Males and females were

nearly equally split, and many of the respondents were travelling as a couple. Many were from the southern California region, or were travelling to SEKI as part of a larger trip that included a visit to Yosemite. As noted earlier, this study sought only baby boomers born between the years of 1946 and 1964. Of the 35 respondents, 16 were born between 1946 and 1954, while 19 were born between 1955 and 1964. The median birth year for interviewees was 1955.

Respondents were then asked why they decided to visit SEKI. The majority of respondents chose to visit "To see the big trees." Respondent 28 noted "It's been on the bucket list, to see the giant sequoias. It has been on the bucket list since I was a kid. Now I brought my kids to see them." However, multiple responses were given as reasons for visiting, including simply because they "Had never been" and "To show to family/relatives." Many of the respondents stated that they were simply "Traveling to National Parks." Respondent 3 noted "We're on vacation—going to national parks. Tracking national parks: Yosemite, Death Valley, Sequoia." Respondent 29 was a repeat visitor who was married in the park. Most of the respondents used the internet to help them to plan their visit to SEKI. Respondent 26 stated that he "Planned at home. [Using] the internet and stories from other people who have visited before." Other respondents used a travel company, usually choosing AAA. Some others who were already familiar with the park simply decided to go to the park. Respondent 29 stated "Last week, we said, let's go to Sequoia and bring the grandkids, and we did it, before they head back to school."

Respondents were asked if they were primarily using their car to travel through

the park. The majority of respondents predominately used their car to travel through the parks (Table 3.1). Some respondents had to think about this question for a while prior to answering, as they had used the shuttle bus nearly as often.

Respondent 32 knew of the availability of the shuttle bus, but opted to use his car to move around as he chose, noting "We have a rental car, yes...there's a shuttle here, but we have not decided to do that. Because [this] way, we can move where we want to move." Respondent 8 chose to utilize the shuttle bus for nearly the same reason, noting:

> I like that I can just hop in it and go. [We] can hop off anywhere we want in the park and we can walk the trails. In Yosemite we used mostly the shuttle bus—parked the car. Now, we park the car and maybe take a shuttle bus, I don't know, but [maybe if we had] time, if it is doable.

Respondent 18 summarized their desire to use a large car while traveling:

> We are (predominately using a car). Unfortunately, it's not a hybrid. It's a huge, huge SUV, just because I thought that would be kind of fun. But, probably not that sustainable, or appropriate though, sorry about that...Well, we're spending a lot of time traveling, so we wanted a lot of space, wanted to feel safe in a big, big car, with a lot of space for suitcases, so it makes sense, traveling around from place to place.

Table 3.1. Codes assigned for responses to the question of "Are you predominately using your car to travel through SEKI?"

| Code | Frequency |
|---|---|
| Yes | 24 |
| RV | 4 |
| Shuttle Bus | 3 |
| No | 3 |
| Tour Bus | 2 |
| Foot | 1 |

When asked what respondents like about their car, the majority stated "The flexibility", with the second highest category being "The convenience" (Table 3.2). For example, respondent 10 stated "Flexibility. We can come when we want, and go when we want." Similar responses were offered, such as "The convenience" and "We can go where we like." For instance, Respondent 29 stated "Yes (we are using our car)...We can see so many more things when we're not on a tour. Even when we go to Europe, we rent a car and travel through Europe. So much better, it's so much better." Respondent 9 stated multiple reasons for using a car: "It gives us the freedom of getting off where we want, we don't have to wait on the bus. There is a place to keep our stuff. Yeah, we don't have to carry our stuff with us. Yeah, we have our lunch in the car."

Table 3.2 Codes assigned for responses to the question of "If so, what is it about using your car that you like?"

| Code | Frequency |
|---|---|
| The flexibility | 9 |
| The convenience | 6 |
| The freedom | 3 |
| We can take lots of things | 3 |
| We can go where we like | 3 |

| | |
|---|---|
| Capability of vehicle | 2 |
| We don't have to wait on the bus | 2 |
| We can stop where we like | 2 |
| It is easy | 1 |
| Shuttles took too long, relegating us to the car | 1 |
| Gives us a place to keep our stuff | 1 |
| We can take our pet | 1 |
| Our party is large | 1 |
| We get to see so much more | 1 |
| There are too many people on a shuttle bus | 1 |

Respondents were asked if there was anything they disliked about using their car. Many of the respondents mainly stated "There's nothing I dislike" (Table 3.3). For example, Respondent 10 noted: "Nothing, really. I mean, I don't like going to Yosemite because of all the people and the gridlock. But this is okay—I usually don't have problems here." However, some did mention the slow, winding roads presented some issues. Respondent 23 stated "It's kind of hard to get around the turns, but that's it." Respondent 1 stated "I get dizziness-the winding roads. Less restrictive if I was in the shuttle, but nobody else wants to go in the shuttle."

Table 3.3 Codes assigned for responses to the question of "What do you dislike about using your car to travel through SEKI?"

| Code | Frequency |
|---|---|
| There's nothing I dislike | 6 |
| Driving the winding roads | 2 |
| The shuttle would be less restrictive | 1 |
| No one in my party wants to ride the shuttle bus | 1 |
| Driving a large camper | 1 |
| Parking the large RV | 1 |
| RV is smelly | 1 |

| | |
|---|---|
| Consuming the gas | 1 |
| You're enclosed | 1 |
| The bus opens up more hiking opportunities | 1 |

Respondents were asked about their familiarity with the Sequoia Shuttle bus service. Most respondents were familiar with the shuttle service (Table 3.4). However, several were either only somewhat familiar, or not familiar (n=13). Respondent 9 noted:

> Well, not really a whole lot. We just stopped at the museum area and we read on the internet where you could ride a free shuttle throughout the park, so we just started asking, you know, what's the best way to get here, and the shuttle seemed like the obvious choice for us. And there are different routes, because we took it yesterday over by the General Sherman tree.

Table 3.4 Codes assigned for responses to the question of "Are you familiar with the Sequoia Shuttle bus service?" and "Could you tell me what you know about it?"

| Code | Frequency |
|---|---|
| Yes | 21 |
| We are glad to hear Sequoia has it | 4 |
| It has several stops along route | 2 |
| Read about it | 1 |
| There are different routes | 1 |
| There is a need to change buses to get to different areas | 1 |
| It was over 30 minutes late | 1 |
| They're convenient (save time of parking) | 1 |
| They help air quality | 1 |
| You can enjoy the view instead of driving | 1 |
| It will return you to the top of Sherman | 1 |
| Somewhat | 7 |
| For people who like to camp it's convenient | 1 |
| Visitor centers should push it more | 1 |

| | |
|---|---|
| No | 6 |
| Shuttle should be made mandatory for a section of the park | 1 |
| We only know of the one from Visalia | 1 |

Respondents were then asked what they knew about the Sequoia Shuttle if they stated they were familiar with it (Table 3.4). Only four respondents stated "We are glad to hear Sequoia has it." Respondent 9 noted: "We haven't gotten off one bus and got on another to visit different areas, but we heard people talking about that, that they had done that." Further, respondent 35 admitted "I didn't know there was one here 'til we got here."

When asked how respondents learned of the shuttle, some stated that it was through the internet (Table 3.5). Some respondents mentioned they learned of it "From the park map and/or newsletter", and simply "When we arrived at the park." Respondent 14 stated that the shuttle was referred to by the Lodgepole Visitor Center, saying "We asked to get best access to the trails and they suggested the bus." Respondent 18 noted "I saw it in the newsletter, but I wasn't really informed about the opportunity." Respondent 15 stated "Just by reading the signs. One of the girls mentioned it, and we just read the signs. Yosemite's been doing it for years. They have it on the little newsletter too." It should be noted that there are signs in SEKI directing visitors to the shuttle stops and some mention the shuttle is free.

Table 3.5 Codes assigned for responses to the question of "How did you learn about the Sequoia Shuttle bus service (if familiar with it)?"

| Code | Frequency |
|---|---|

| | |
|---|---|
| Internet | 5 |
| From the park map and/or newsletter | 4 |
| When we arrived at the park | 3 |
| Shuttle signage | 2 |
| Someone in party mentioned it | 2 |
| We began asking people once we arrived | 1 |
| We live in Visalia and it is well advertised | 1 |
| Reading before we arrived | 1 |
| Lodge employee | 1 |
| Visitor Center | 1 |
| We asked for best trail access and it was recommended | 1 |
| Brochure at motel | 1 |

Respondents were next asked if they had ridden the shuttle bus (Table 3.6). While most respondents did not ride the shuttle, eleven of the baby boomer respondents did. Respondent 1 stated "We won't be riding it because we want to go to the cave, and it doesn't stop at the cave." Further, Respondent 19 noted "No, I have not. We're staying just outside the park, Stoney Creek Lodge, so you need a car to get from there." Respondent 10 noted that the shuttle would be an attractive option for his parents, and possibly for he and his wife as they get older, stating:

> Yes, and if I was bringing my parents, they're in their 80s, and if I was bringing them for a day or something like that, or maybe even something like that I may think about using the shuttle, because it may be easier, or as we get older. We're pretty old now, but…(laughing). Well, we have the car. Didn't need it.

Table 3.6 Codes assigned for responses to the questions of "Have you ridden the Sequoia Shuttle bus during this visit to SEKI? What about previous visits? Why or why not?"

| Code | Frequency |
|---|---|

| | |
|---|---|
| Yes | 9 |
| Our RV is large | 1 |
| We like tours | 1 |
| No | 9 |
| We have a dog with us | 2 |
| It doesn't go to a destination we plan to visit | 1 |
| We have a car, so we don't need it | 1 |
| We thought walking (at Sherman Tree) would be better than using it | 1 |
| We stayed outside the park | 1 |
| We are traveling through and leaving the other side | 1 |
| We couldn't get any information on it | 1 |

Respondents were asked if they would park their car and ride the shuttle bus (Table 3.7). Many respondents said that maybe they would, and some offered reasons. These responses reveal many differing reasons, such as “Maybe if it was quicker because of congestion” to “We may have if we had been informed earlier.” Respondent 19 noted that the shuttle system in Grand Canyon seemed a better one, and added that the location he was staying in did not offer a shuttle stop:

> But, I think, like in the Grand Canyon, the shuttles have changed it dramatically. So, when I went there before you could drive out to Hermit’s Rest, and it was bumper to bumper. Now there is a lot, except it’s for shuttle buses, and it’s much nicer. I think if this were done that way it’d be better. It’s a little bigger and harder, but the shuttle bus system is really nice...We’re staying just outside the park, Stoney Creek Lodge, so you need a car to get from there.

Other respondents noted some of the issues with riding the shuttle bus, such as taking many things with you and the hours of operation of the shuttle system. For example,

Respondent 29 stated “So, you can’t carry all your clothes with you, you can’t carry all your food with you. Those two things are a biggie for us. We start at six in the morning; we don’t get back until like eight or nine at night; we’re goers.”

Table 3.7 Codes assigned for responses to the question of “As a visitor to SEKI, would you park your car and ride the Sequoia Shuttle bus to visit Sequoia or Kings Canyon National Parks? Why or why not?”

| Code | Frequency |
|---|---|
| Yes | 3 |
| Probably | 1 |
| Because you get to see most of the sites | 1 |
| Maybe | 6 |
| If it was quicker because of congestion | 1 |
| Maybe if we were traveling with older people, or as we get older | 1 |
| We may have if we had been informed earlier | 1 |
| Maybe because the RV is hard to drive | 1 |
| Maybe after a day or two of driving my car | 1 |
| Maybe, but the two young adults with us may not enjoy it | 1 |
| No | 1 |
| Because of the shuttle route | 1 |
| Because of the short time we have here | 1 |
| We stayed in Kings Canyon (no shuttle) | 1 |
| We came to get away, not be on crowded bus | 1 |
| Shuttle leaves too late in the AM | 1 |
| We can't take our food/clothes | 1 |

Respondents were then asked “What would encourage you to stop driving your car and ride the shuttle bus?” (Table 3.8). The responses ranged from “Adding shuttle stops” to implementing a “Roofless bus.” Respondent 12 noted one of the issues present with the current shuttle bus route: “Uh, no, I think the shuttle suits us pretty well, where it

does run. It is just a shame it is not going to Crystal Cave. Because we can't go there. More stops would be a good thing." And, Respondent 28 noted the merit of having an open-top bus to see more of the park: "Roofless bus. Yeah, roofless bus would be so much better because then you could really see. Because in a car I kept saying man, we got a roof. Yeah, roofless bus."

Table 3.8 Codes assigned for responses to the question of "What would encourage you to stop driving your car and ride the Sequoia Shuttle bus in SEKI?"

| Code | Frequency |
|---|---|
| Nothing would make a difference | 6 |
| Shuttle suits us well | 5 |
| Adding shuttle stops | 4 |
| It should be efficient transportation; no more, no less | 3 |
| Nothing, unless it was mandatory | 2 |
| More advertising about it and where it goes, when, & that it's free | 2 |
| Roofless bus | 2 |
| A tour guide | 1 |
| Unsure | 1 |
| I like to see things up close & personal | 1 |
| More concessions | 1 |
| If we could take our dog | 1 |
| Ease of pick up and drop off | 1 |
| Low crowding | 1 |
| Offering a place to leave our stuff | 1 |
| Offering more/larger/clean bus windows | 3 |

Respondents were asked if the integration of more technology on buses, or perhaps implementing historic-looking buses, such as those seen in Yellowstone and Glacier would encourage them to stop driving and ride (Table 3.9). Most respondents felt

this would not make a difference, but some expressed the desire for Wi-Fi internet. Respondent 6 offered insight into how the integration of technology would be useful:

> Real-time tracking to see where the bus is would be helpful. An example is in Disney World now they have an application for your phone that will allow you to know where the lines are, 10 minutes versus 40 minutes versus 60 minutes. It allows you to know what restaurants are open—it's constantly changing so you can constantly be changing your trip. So it would be very helpful to have an application on your phone.

Further, Respondent 9 added "Well, I'm on four square (a location-based mobile app), so if I could check in at these places that would be fine. Because I keep it as kind of a record. It would be kind of fun. Periodically, I may want to check my email." However, many did not agree. Respondent 28 noted "Technology, forget that. We're not here for that. We want to see it (the park)."

Table 3.9 Codes assigned for responses to the question of "Would the integration of more technology on buses, or historic-looking buses encourage you to stop and ride?"

| Code | Frequency |
|---|---|
| No (technology) | 4 |
| Yes, Wi-Fi | 4 |
| No (historic-looking bus) | 3 |
| Probably not (technology) | 2 |
| Yes (technology) | 1 |
| Yes, A downloadable tour (technology) | 1 |
| Real-time information phone app would be helpful | 1 |
| Interesting idea, but would not make a difference (historic-looking bus) | 1 |
| Probably not (historic-looking bus) | 1 |

Respondents were then asked if offering interpretation and education on buses would encourage them to stop and ride (Table 3.10). Most respondents felt this would make them more apt to ride. While some felt that having an interpretive ranger on the bus would be best, others felt a video player and optional headphones would work well. Respondent 23 noted: "Oh, yeah, that would be nice. I've always liked that. The earpieces you could put in would matter. Kind of like to tell a lot about the park. We took a bus tour in Hollywood yesterday and they just set a box there with earphones, just the little plastic ones, you know?" Respondent 15 was somewhat reluctant about adding services, but still noted the feature of learning while riding the shuttle bus, "I mean, it (the bus) serves a purpose, and it does a good job. And the driver is always nice. Sometimes, we'll get a driver who will give us information on the area as we're driving along."

Table 3.10 Codes assigned for responses to the question of "Would interpretation and education on buses encourage you to stop and ride? Why or why not?"

| Code | Frequency |
|---|---|
| Yes | 11 |
| Yes, we like to learn | 4 |
| Maybe | 3 |
| Yes, would make it more interesting | 2 |
| Yes, with earphones | 2 |
| It doesn't matter | 1 |
| Yes, Interpretive Ranger on bus would be great | 1 |
| Yes, Tour Guide telling of things | 1 |
| Yes, a video recording | 1 |

Respondents were then asked what the concept of freedom meant to them when traveling through SEKI (Table 3.11). The majority stated that "Stopping when I want" equated with freedom. To a lesser extent was the response "Moving easily via the park shuttle bus." Next was the response of "Driving to any place we choose." Respondent 7 said: "The car allows us to do more hikes. If we were stuck on the tram, we wouldn't have got to do as many as we would have liked." While Respondent 16 noted: "For me, it is to stop when I want. And the ability to take things like an ice chest." Interestingly, the ability to choose whether "to walk, drive my car, or ride a shuttle" was stated by only two respondents.

Table 3.11 Codes assigned for responses to the question "What does the concept of freedom mean to you when you think about traveling in SEKI?"

| Code | Frequency |
|---|---|
| Stopping when I want | 13 |
| Moving easily via the park shuttle bus | 6 |
| Flexibility | 5 |
| Driving to any place we choose | 5 |
| Ability to take things with you | 3 |
| Not having to worry about the bus maybe being crowded | 2 |
| Ability to take bulky items | 2 |
| Having a choice to walk, drive my car, or ride a shuttle | 2 |
| Ability to leave when all members of group are finished with hike | 1 |
| Having the car allows us to do more hiking | 1 |
| The car is an easy alternative to the shuttle with less time in the park | 1 |
| Not having to wait | 1 |
| Getting to a place in the park early | 1 |
| To have my own car | 1 |
| Having the shuttle run frequently | 1 |
| We can walk a bit and then take the shuttle to go elsewhere | 1 |
| To be on our own | 1 |

Respondents were then asked the question of "What detracts from a transportation sense of freedom?" The fact that the shuttle does not travel to all of the destinations in the park was the main detractor. However, "Bus is full" and "Waiting for a bus" were both seen as obstacles to having a transportation sense of freedom by some respondents. Respondent 10 noted that the shuttle bus times of operation were a hindrance to her and her party taking the shuttle, stating:

> It's the ability to just jump in your car and go. And to come any time you want. This is late for us. A lot of times we might get out at 6 and get up here. We're late today. It's nice to kind of get ahead of the crowd.

Respondent 5 spoke of the difficulty he had finding parking and noted the advantage of using the park's shuttle bus system "...Lack of parking in some areas. Like we were going to stop at the big trees/Giant Forest Museum. There's a little hike there and I didn't really know where the parking was. So, we ended up not going. So, that would be an advantage of a bus, you know."

Table 3.12 Codes assigned for responses to the question "What detracts from a sense of transportation freedom?"

| Code | Frequency |
|---|---|
| Shuttles not covering all attractions in park | 6 |
| Bus is full | 2 |
| Waiting for a bus | 2 |
| Not being fully aware of all transportation-related options | 2 |
| Lack of parking in some areas | 2 |
| Lack of information of where parking areas are | 1 |
| If we were told we couldn't enter a pull-off due to our camper | 1 |
| Being stuck on a shuttle bus would limit the hiking we could do | 1 |

| | |
|---|---|
| Knowing you have to get to a place by a certain time | 1 |
| The inability to stop where I want | 1 |
| Knowing the bus stops in the early evening | 1 |
| The buses don't run early in the morning | 1 |
| Having to get off one bus and on another to get to a destination | 1 |
| Being stuck with disrespectful bus passengers | 1 |

Respondents were next asked the question "How does the freedom to go where you want to, or when you want to, influence your decision to ride the Sequoia Shuttle?" (Table 3.13). The majority stated that the freedom to go where you want to, or when you want to influenced their decision to ride the shuttle bus. When Respondent 10 was asked the question, she stated "It does. It's that independent thinking that will get us into trouble sooner or later. Yeah, we might not be able to do that forever." Respondent 3 stated his desire: "To stop when I want to. That's why cars have been successful, bus systems haven't." However, Respondent 18 spoke of how education could be transmitted to visitors to enhance a sense of freedom, stating:

> I guess it could be a little bit limiting. But I think at the points where the shuttle stopped if it had the little trails you could do from those points, you would feel less restricted, because you could do something at each particular point, so it's like a shuttle bus route and key points you'd have options. That would enhance your sense of freedom, I think.

Respondent 15 was supportive of the shuttle system and noted how he made it work for him:

No, because, you make up your mind where you want to go and you just check the schedule to make sure it will work out. Usually you can, the bus comes pretty frequently. You don't have to wait. If you're impatient, it's a problem. I'm not; I don't mind waiting.

Table 3.13 Codes assigned for responses to the question "How does the freedom to go where you want to, or when you want to, influence your decision to ride the Sequoia Shuttle?"

| Code | Frequency |
|---|---|
| It influences my decision | 10 |
| It's a determining factor | 4 |
| It is not a major concern | 4 |
| Trip was planned around the shuttle route | 2 |
| The shuttle is helpful | 2 |
| There are times and places where the shuttle is better than driving my own car | 2 |
| The car allows us to go as we wish | 2 |
| To stop when I would like | 1 |
| It doesn't matter; if we want to take it we can; if not, we won't | 1 |
| The driver's courteous info regarding the shuttle route is helpful | 1 |
| The shuttle goes to enough places | 1 |
| It's nice to not have to worry about driving | 1 |
| If the shuttle didn't go to an area I can go with my car | 1 |
| Freedom would be enhanced if info was available about what can be hiked from each stop | 1 |
| The need to know when you're going to get to a certain place | 1 |
| If I am not familiar, it may be nice to take a shuttle because they tell you things | 1 |
| I want to go on my own time | 1 |
| Like to get away from the crowds; hard to do with the shuttle | 1 |
| Bus only went to a destination hourly; that is too infrequent | 1 |
| Wanted to go try see bears at dusk; the shuttle doesn't run late | 1 |

Respondents were then notified that public transportation in parks is less often used by older visitors (Table 3.14). They were asked why they thought this was the case. The majority of respondents stated that "Some may have more difficulty walking/may have health issues." The next highest response category was "People don't like to stand/wait." Respondent 26 noted that her "knees are not good anymore" and alluded to the possibility that climbing the steps of some buses could prove difficult. While some of the large shuttle buses in SEKI were able to lower during loading/unloading, most of them did not have this capability. Respondent 12 noted more reasons why some people may not ride:

> People don't like lining up or waiting or the crush when there's a lot of people. The young people don't get up. Ten to 15 year olds, they would never stand, nor would their dad. That's gone. I don't know how you'd get that back. And, that would stop a lot of older people probably. They don't want to stand in a bus.

More frequent use of the restroom was offered as a reason by Respondent 32, "Well, sometimes they may have issues where like they have to use the restroom. Like my mother-in-law. She has to get to a restroom quicker and maybe they have some health issues, and maybe they are tired, and they can't just keep waiting forever."

A sense of freedom could be offered by displaying how long one would need to wait for a bus, noted Respondent 18: "...In many bus stops, there are these electronic signs that tells you when the next bus is coming. So when you show up to one of these stops you don't wonder, will I be waiting 5 minutes, will I be waiting half an hour? So,

having those little digital signs that say when a bus will arrive makes it easier. Gives you more a sense of freedom."

Table 3.14 Codes assigned for responses to the question "Public transportation in parks, like the Sequoia Shuttle, is less often used by older visitors. Why do you think this is the case?"

| Code | Frequency |
|---|---|
| Some may have more difficulty walking/health issues | 11 |
| People don't like to stand/wait | 8 |
| Cars are more flexible | 4 |
| It takes planning; that takes more time & effort | 4 |
| Probably moving slower | 3 |
| It's habit to drive a car | 3 |
| More difficult to find bathroom as quickly | 3 |
| Want their freedom of choice | 3 |
| Driving a car is more comfortable | 2 |
| Buses in southern California known for being slow and unreliable | 2 |
| Don't want to feel like a burden | 2 |
| Can't take as much with you (food, etc.) | 2 |
| Not enough benches at stops | 2 |
| No desire to share the space | 2 |
| Buses can get crowded | 2 |
| Tied to it; you can't do your own thing as much | 2 |
| Not used to the benefits it provides | 1 |
| Grew up with the car | 1 |
| Western US has never fostered public transportation | 1 |
| Steps on shuttles too high | 1 |
| Multiple connections are a problem | 1 |
| Buses can be boring; education could be offered on bus | 1 |
| Would like to know exactly when bus will arrive | 1 |
| Loud, disrespectful kids ride buses | 1 |

Next, respondents were asked what would discourage them from riding the shuttle bus in Sequoia (Table 3.15). Overwhelmingly, respondents stated that nothing would discourage them from riding. Respondent 28 spoke of his preference for using his car:

> I don't think anything particularly would discourage me. But, me being here and not knowing the access points and not knowing it all. I mean, you can see it (the shuttle) and it seems like it's pretty easy to get the hang of it. Nothing's really discouraging, other than, you know, if you had no other choice. If you give me a choice, I'm going to take my car. If I don't have a choice, I'm going to do what I got to do (take the shuttle). Probably rather hike in than take a bus. If it came down to it. If they said, here's your entry point. You can either take a hike, or a bus, we'd rather hike.

Respondent 32 noted "…Just if there's a big long line waiting there, that's all. I'd be like, we're not waiting, we're not waiting, we're going to take the car." However, there were also staunch supporters of the shuttle system. Respondent 6 stated:

> No, not at all. I'm in big support of it. Before coming here, we went to San Francisco. We got the three day public transportation tickets. We did the buses, the public buses, we did the trolleys, the cable cars and we were fine with it. We left our car parked the whole time. So, I think it would probably be good.

Respondent 13 said "No, it's alright, just the construction is annoying, but we'd be stuck if we were in a car anyway."

The fact that the service did not connect to Crystal Cave and Kings Canyon

National Park were brought up as reasons for not utilizing the bus system on many occasions. Respondent 20 stated "No, I think it's a great tool to have. It's just something that didn't fit for us right now. It saves gas and everything else. Does it all go all the way to Kings Canyon?" *Interviewer*: "It does not, it goes to Dorst Campground." Respondent 20: "Ah, that would mess us up. So, you couldn't get one there to Kings Canyon. See, that would be another hindrance, because we want to see both."

Another theme that was found to deter ridership was the absence of a transit center or area. Respondent 29 noted some of the conveniences that this type of center could bring:

> ...I think the biggest thing is carrying your stuff with you. I mean, we have a car full of stuff still. If you had, how could you make lockers for this many people, I don't know, but if you had somewhere you could store your stuff, get off the shuttle and store it, and then go get your stuff. Because you don't, for the three different hikes we're going to do today, you don't need the same food, the same equipment, the same everything.

Table 3.15 Codes assigned for responses to the question "What would discourage you from stopping at one of the five main parking areas and riding the Sequoia Shuttle bus in Sequoia?"

| Code | Frequency |
|---|---|
| Nothing | 21 |
| More convenient to take the car | 3 |
| Overcrowded bus | 2 |
| Inability to stop where I want | 2 |

| | |
|---|---|
| Not having my freedom of choice | 2 |
| Time constraint | 1 |
| If bus went to an unwanted place | 1 |
| Having a limited amount of time | 1 |
| The bus that ran late | 1 |
| There is no central park and ride place | 1 |
| Wait times too long | 1 |
| It doesn't go to Kings Canyon | 1 |
| Not being able to take as many things | 1 |
| Integrating lockers to store items would help | 1 |
| Seeing long wait lines | 1 |
| It's hard to see out of a bus | 1 |
| Don't want to feel trapped with 65 year olds | 1 |

**Discussion and Conclusions**

This article studied baby boomer visitors to SEKI who were and were not utilizing the free shuttle bus in Sequoia. The study identified transportation freedom-related factors that could inhibit baby boomer visitors from riding shuttle bus systems in national parks. In contrast to existing literature (e.g., Dilworth, 2003; Moscardo et al., 2001; Pettebone, 2011; Prideaux et al., 2001), this study found that a relatively high number of baby boomer travelers were utilizing the shuttle system. Many of those who did not choose to use it were thinking of riding, or were at least familiar with it. Several respondents offered deep insight on the merits of using the system, such as it offering more hiking opportunities, a way to save gas, and an overall easier method of traveling. Perhaps this change in behavior is because of a greater experience-use-history with shuttle systems in other national parks, as alluded to by White (2007). Many respondents

mentioned they had used shuttle systems in other parks, most notably Yosemite, which should not be too surprising given the parks are only separated by a few hours' drive.

The fact that many of the respondents cited their use of shuttle systems in other national parks seems to bolster the fact that many baby boomers are coming around to using shuttle systems, and not just in SEKI. Some respondents compared certain characteristics of the Sequoia Shuttle to those other systems, usually noting ways the Sequoia Shuttle could be further enhanced. Non-ridership of the shuttle bus system seems to now be partially due to a low number of amenities or services, as many of the respondents noted how 'good' the other shuttle systems (e.g., Those in Yosemite, Grand Canyon, Zion National Parks) were that they had ridden. For instance, there was an overwhelming desire to add interpretation and education services to the shuttle buses. Adding interpretation as an incentive to ride was also found in a study of visitors to Acadia (Holly et al., 2010). The literature findings of baby boomers' desires to learn were thus bolstered by this study (Cleaver & Muller, 2002; Lipscombe, 1995; Muller & Cleaver, 2000). However, for some unique situations, such as those visitors who have only one day in the parks and use one entrance to enter and a separate entrance to exit, or for those who travel with pets, the shuttle will likely remain an unviable alternative.

The baby boomers studied did not seem to think of themselves as old. When asked why older people do not ride shuttle buses as often as younger people do, the respondents tended to respond with reasons why 'those people' or 'they' may not ride as often. This should not be too surprising, as baby boomers have been shown to pride themselves on being an active and youthful generation (Fitzpatrick, King, & Davey,

2013). This age group is adapting to aging. This group appears to resist being called 'older.' This was noticed on many occasions during the interviews conducted in this study. For instance, when a respondent was asked why public transportation is less often used by older visitors, she replied, I think that *they* don't like to share the space. In a study (Pettebone et al., 2011) of visitors in Rocky Mountain, those under 40 were less inclined to drive personal vehicles versus the park shuttle. Those aged 40-59 preferred to drive their personal vehicles, and there was a strong preference for those over 60 to take their personal cars. Perhaps this feeling of being young is a reason baby boomers are beginning to ride more often. Maybe baby boomers are beginning to realize the liberating effects a shuttle system can have. There are more opportunities for them to learn while they sit and ride; they can look out very large windows and relax more.

Longer life spans have likely contributed to this feeling and seem to push away thinking of age as a number. Baby boomers are likely the seminal group to abolish perceptions of aging, partially due to their ability and desire to participate in adventurous activities. This will likely be difficult for many in the field of parks and recreation to adapt to, as members of this large cohort do not see themselves as aging.

Many of the respondents stated the reason they choose to use their own car in SEKI was the ability to stop wherever and whenever they like. The flexibility of cars was mentioned the most often. Perhaps adding on-demand stopping to the shuttle service could enhance a feeling of transportation-related freedom. This could make for an easier transition from private vehicle use to shuttle use.

Many respondents noted how they appreciated the shuttle as an alternative to

using their car, or simply walking. Some mentioned that they like the ability to decide which transportation alternative to choose. However, many other respondents stated that they were only 'somewhat' familiar with the shuttle bus system. Responses to the question of "Could you tell me what you know about it (the Sequoia Shuttle)" were vague. This likely accounts for some degree of non-ridership. The shuttle bus information is contained within the park newsletter, but is located several pages in, and its prominence seems understated. It was apparent that some respondents were only somewhat informed of the shuttle service and how it works. SEKI park managers and staff thus have an opportunity to increase ridership by placing more emphasis on the shuttle bus systems in their information venues, such as newsletters, social media sites, and web sites.

Somewhat surprising was the minimal mention of having shuttles which run frequently. This runs counter to the relevant literature which has consistently shown that longer headways lead to a loss of ridership (Grava, 2003; Holly et al., 2010; Shiftan, Vary, & Geyer, 2006). Perhaps this means that shuttle service providers have caught on to this point and offer efficient shuttle bus services with low headways. In SEKI, buses typically ran every 15 minutes except for days with very high visitation. Optimal headways have been shown to be approximately ten minutes (Grava, 2003), but somewhat longer headways in a park setting may be just as acceptable.

Parks could likely gain ridership from the baby boomer cohort, and others as well, by stating the benefits of using the shuttle bus system. This was also recommended by White (2007) and Pettebone et al. (2011). More information on the positive aspects of

using a shuttle bus system could help visitors better understand the system and why it could be a viable transportation alternative. Some respondents noted they used the bus system for more hiking opportunities. There is the potential for riders to hike more and see more while visiting SEKI; they can become more active by using the bus system. They can save fuel by riding the shuttle. Also, it is safer to ride the bus; riders are able to look around and see the park and do not have to focus on driving.

Some respondents mentioned how the shuttle bus system actually adds freedom in that you have more possible ways to get around in the park. One respondent touched on the fact that it allows you to actually look around and see the park's natural resources. Getting more visitors onto buses could not only help parks to relieve vehicular congestion and decrease air pollution, but could help to provide for better visitor experiences. Perhaps a promotion of this increase in freedom in park newsletters and web sites could gain riders. This would be a low to no-cost initiative carried out by park staff members. Another way to perhaps add a sense of freedom to riding would be to offer a restroom on the shuttle buses. This would likely increase ridership by the baby boomer cohort.

Giving the shuttle a base of operations could cause more baby boomers to begin to ride it. The fact that there is no transit center, or main shuttle station area was brought up more than once in this study. There is not a transit center at SEKI, and perhaps some national park visitors have grown accustomed to seeking out this type of area when visiting. In Grand Canyon National Park, many visitors are directed to a distinct transit center where shuttle buses arrive and depart from. Some respondents expected there to be a center at SEKI. Perhaps this is a reason why many people, including repeat visitors

did not know of the shuttle system. The buses at first glance may visually resemble private tour buses. Many respondents throughout this study mentioned the fact that there were things that they needed or desired to carry. That would not have been possible if they were to only ride the shuttle bus. A transit center with devices for storage of some bulky items, such as coolers for a lunch could potentially increase ridership. A center could also produce more of an 'experiential' feel where shuttle bus rides in national parks become part of the park visitation experience. Managers may have the chance to increase shuttle bus ridership by integrating a transit center into their ATS program.

Future research could be conducted to examine specific ways to further entice people to ride, such as implementing a roof-less bus or larger windows. Promoting these potential changes, and other benefits such as how the SEKI shuttle helps to alleviate the air pollution that is prominent in southern California, could entice more people to ride. Research could also find out how or what people want to learn while on a bus. Perhaps a video-based interpretation system on buses may be desired, but having loudspeakers throughout the bus may not be the best idea in a national park setting. One respondent had mentioned the possibility of having a system where one could choose to plug in headphones, thus being able to 'opt-out' of the service. This would allow for riders to decide whether or not they would like to listen; they could choose at which points along their shuttle ride they would prefer to listen. However, other respondents brought up different ways of facilitating this. Having an NPS Ranger aboard every shuttle bus in SEKI was mentioned but this would be a costly measure.

As national parks seek to mitigate congestion along roads in parks, it is important

to understand why some visitors choose to drive their own cars while others opt for a park's shuttle bus. This study reveals notable insight into the factors related to ridership among a popular demographic who visits parks, the baby boomer generation. By promoting why shuttle systems are needed in national parks and their benefits, which will mean communication to visitors, more baby boomer visitors will be enticed to ride. Also, from the results of this study, baby boomers are a cohort that enjoys learning to a high degree. Implementing interpretation and education services on buses could be an effective method at gaining baby boomer riders.

It seems apparent that further steps should be taken to provide a transportation experience that is desired by baby boomer visitors. The demographic seems to be interested in transit, but needs to be further enticed to use it, or use it more often. Parks will only become more crowded and sought out so long as the population continues to increase. Having the foresight to plan for the needs and desires of arguably the most prolific demographic to visit parks will help to ensure that visitor experience remains high at these iconic national places.

# CHAPTER FIVE

# SUMMARY

This dissertation, specifically the three articles slated for publication, intended to explore the needs and desires of the baby boomer cohort which visits national parks. The consideration of this cohort is of importance as it has been shown to contain the average visitors to some national park units. Managers of national park units need to know more about this demographic which visits their parks in high numbers. Also, both national park managers and the NPS should know which outdoor activities baby boomer visitors prefer to do due to the large size of the cohort, as well as the reasons inhibiting their ridership of free shuttle buses in the national parks. Further, the findings in this dissertation show that a large number of members from the generation X are becoming the average visitors to national parks.

## Summary of Major Findings

Article one of this dissertation focused on the age of visitors to units of the U.S. National Park System. This article shows that, when looking at the age of those who travel to national parks who are 18 and over, many baby boomers visit national park units. The average visitor is now from generation X. This is a significant finding for the NPS, as it clarifies an omission in the current literature.

Article two offers insight into the recreation desires of the baby boomer cohort. Specifically, this generation was found to be much more engaged in outdoor recreation activities than general visitors to SEKI. An overwhelming majority was found to self-

identify as adventurous, while close to half stated they enjoyed activities with an element of risk. This article will add to the literature which has been showing that baby boomers are becoming interested in more adventurous activities (Boyes, 2013; Muller & Cleaver, 2000). A person's age may perhaps be thought of as simply the number of years a person has been alive. However, the actions one takes and desires one has may be better, more accurate indicators of age. Park managers will be able to choose to modify existing signage, educate the cohort on the potential resource issues of entering the backcountry with little to no training or experience, and determine whether some resources near the frontcountry should be made more accessible. Baby boomer visitors are much more active than the typical visitor; they engage in many outdoor recreation activities. At the same time, they are aging and may be less prepared for some of the activities they seek out. Park managers can assist by tailoring communication and some facilities toward the baby boomer cohort.

In article three, it was found that while the majority of visitors specified that they predominately used their car at SEKI, nearly half stated they either had used the shuttle bus, or that they may during their visit. Many visitors stated experience-use history with shuttle buses in other national parks, such as Yosemite and Zion. This is an important finding, as it seems that the more visitors are exposed to, and learn of shuttle systems in parks, that they are more apt to ride. With some changes, perhaps potential riders will increasingly be attracted to, and then likely ride the free shuttle buses at SEKI, and at other national parks.

This dissertation sought to examine baby boomers in national parks on a multi-

faceted level. The results from article two of this dissertation find that baby boomers are interested in getting out into the backcountry and having an engaged visit. They are adventurous, but are still thoughtful and careful when contemplating risky outdoor activities. They also are very eager to learn, and may choose to ride transit buses in national parks more often if they can learn more about the park while they are riding a bus to their next shuttle stop.

This dissertation provides a cohesive view of a cohort which steadfastly visits national parks, examining the age of visitors, what baby boomer visitors prefer to do when visiting the parks, how life events affect outdoor activity selection, and how the important issue of freedom in transportation is viewed. It is clear that members of the cohort are unique in their desires and interests, and managers can use this information to make changes in relevant policies, if so desired. Further, this dissertation contributes new knowledge by filling gaps within the existing literature such as how baby boomers are participating in outdoor activities at higher levels, that they seem to be more willing to ride shuttle buses in national parks than previously thought, generation X is becoming the average visitor to national parks, and that baby boomers are still visiting national parks when looking at those visitors who are 18 and over.

Future park planning objectives could include social, demographic, and literature-based factors that tie together the complex baby boomer demographic. There are research needs for incorporating these themes into the field of parks and recreation management. First, an effort to continue the efforts of the VSP, and ensure those results are available to researchers will allow for a continual thread of data. This will make it

possible for researchers to determine if generation Xers and baby boomers continue to visit at high levels.

Second, perhaps the reason baby boomers visit national parks and are interested in adventurous activities is to remain young. Selection Optimization with Compensation (SOC) theory suggests that as one moves across the lifespan, one limits oneself to fewer activities. A 'bucket-list mentality' may become apparent where older tourists seek very adventurous activities at the national park they visit. This could prove to be a very costly, resource-intensive issue for the NPS in terms of search and rescue efforts. In Grand Canyon, a permitting system is already underway due to the popularity (and low training/preparation for) hiking or running from one rim of the canyon to the other (NPS, 2015a). And, at Yosemite a permit system was implemented in 2010 for hikers on the Cable Route to the summit of Half Dome due to safety concerns and increased crowding (NPS, 2015b). Therefore, more interpretation and education on the potential dangers of traveling in the backcountry could prove useful. Perhaps instead of stating trail mileage only, an approach listing the time needed to reach a destination could be more helpful. And, while difficult to estimate, an NPS-wide initiative to rate trail difficulty and profess that information to travelers could prove useful for generation X members, as well as baby boomers. Traveling into the backcountry of nearly any national park could prove to be risky, no matter the distance, for travelers who have not prepared for the journey. Third, research is needed to determine the best method to deliver interpretation and education services to visitors on buses. Baby boomer visitors were most interested in this offering when asked what would entice them to ride. Understanding what they want to

learn of when visiting and how they want to learn it is an important interpretive domain.

The baby boomer demographic will impact parks and protected areas in a multitude of ways, as will other demographic cohorts since each one is unique. Future research on outdoor activity preparedness levels and interests could be of the qualitative type to delve into the aforementioned 'bucket-list' mentality. Also, a quantitative approach could be taken to begin to obtain data on ridership of shuttle buses in national parks by the baby boomer cohort. More amenities, such as the potential to have a restroom on a bus, or perhaps having a bus with several desired amenities for which a fee would be charged, could be listed on a survey to find which ones have the greatest potential to increase ridership.

This dissertation has demonstrated how many factors of a key demographic cohort can be investigated to provide further knowledge and recommendations. It seeks ways to mitigate congestion in our national parks by learning what inhibits baby boomer visitors from riding shuttle buses in the parks. It adds to the literature by finding that older travelers are interested in adventurous outdoor activities in our nation's parks. Many have been frightened to think that visitors to national park units may dwindle if visitors become older. However, we may simply find that visits will continue, but that visitors become older than they used to be. Older visitors tend to have more time, wealth, and a desire to visit outdoor areas. Unlike many studies that extrapolate age data and then examine visitor activity data, this dissertation undertook a more cohesive approach to examining a cohort. This allows for a better understanding of the desires and interests of the baby boomer cohort which visits national parks.

REFERENCES


Addison, G. (1999). Adventure travel and ecotourism. In *Adventure Programming* (J. C. Miles and S. Priest, Eds.). pp. 415-430, Venture Publishing.

AdventureCORPS. (2013). Runners to challenge 135 miles from Death Valley to Mt. Whitney. Retrieved from http://www.badwater.com/2013web/2013prepr.html

Agahi, N., & Parker, M. G. (2005). Are today's older people more active than their predecessors? Participation in leisure-time activities in Sweden in 1992 and 2002. *Aging and society, 25,* 925-941.

Agahi, N., Ahacic, K., & Parker, M. G. (2006). Continuity of leisure participation from middle age to old age. *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences, 61*(6), S340-S346.

American Public Transportation Association. (2014). 2014 public transportation fact book. 65th Ed. American Public Transportation Association.

American Public Transportation Association. (2007). A profile of public transportation passenger demographics and travel characteristics and travel characteristics reported

Antonovsky, A. & Sagy, S. (1990). Confronting developmental tasks in the retirement transition. *The gerontologist, 30,* 362-368.

Babbie, E. (2011). *The basics of social research* (5th ed.). Cengage Learning.

Barringer, M. D. (2002). *Selling Yellowstone: Capitalism and the construction of nature.* University Press of Kansas: Lawrence, KS.

Beedie, P., & Hudson, S. (2003). Emergence of mountain-based adventure tourism. *Annals of tourism research, 30*(3), 625-643.

Boyes, M. (2013). Outdoor adventure and successful ageing. *Ageing and society, 33, 4,* 644-665.

Buhalis, D. & Darcy, S. (2010). *Accessible tourism: Concepts and issues.* Bristol, UK: Channel View Publications.

Carlson, E. (2009). *20th-century US generations*. Population Reference Bureau.

Carr, E. (2007). *Mission 66: Modernism and the national park dilemma.* China: University of Massachusetts Press.

Cater, C. (2000). Can I play too? Inclusion and exclusion in adventure tourism. *The north west geographer, 3*(2), 50-60.

Chen, Y., Guo, Y., Liu, H., & Liu, J. (Eds.). (2013). Proceedings from *The 18th Annual Graduate Education and Graduate Student Research Conference in Hospitality and Tourism.* Pullman, WA: Washington State University.

Chodzko-Zajko, W., Sheppard, L., Senior, J., Park, C. H., Mockenhaupt, R., & Bazzarre, T. (2005). The National Blueprintfor Promoting Physical Activity in the Mid-Life and OlderAdult Population. *Quest, 57*(1), 2-11.

Cleaver, M. & Muller, T. E. (2002). The socially aware baby boomer: Gaining a lifestyle-based understanding of the new wave of ecotourists. *Journal of sustainable tourism,* 10:3, 173-190.

Coffey, A., & Atkinson, P. (1996). *Making sense of qualitative data: Complimentary research strategies.* Thousand Oaks, CA: Sage Publications.

Cole, D., Watson, A., & Roggenbuck, J. (1995). *Trends in wilderness visitors and visits: Boundary Waters Canoe Area, Shining Rock, and Desolation Wilderness.* USDA Forest Service Research Paper INT-483.

Collia, D. V., Sharp, J., & Giesbrecht, L. (2003). The 2001 national household travel survey: A look into the travel patterns of older Americans. *Journal of Safety Research, 34*(4), 461-470.

Cordell, H. K., Betz, C., Bowker, J. M., English, D. B. K., Mou, S. H., Bergstrom, J. C., Teasley, R. J., Tarrant, M. A, & Loomis, J. (1999). Outdoor recreation in American life: A national assessment of demand and supply trends. Champaign, IL: Sagamore Publishing.

Cordell, K. (2012). Outdoor recreation trends and futures: a technical document supporting the Forest Service 2010 RPA Assessment. Gen. Tech. Rep. SRS-150. Asheville, NC: U.S. Department of Agriculture Forest Service, Southern Research Station.

Costa, D. (1998). *The evolution of retirement.* Chicago, IL: University of Chicago Press.

Creswell, J. W. (2007). *Qualitative inquiry and research design.* London: Sage Publications.

Csikszentmihalyi, M. 1975. *Beyond boredom and anxiety: The experience of play in work and games.* San Francisco, CA: Jossey-Bass, Inc.

Daigle, J. J., & Zimmerman, C. A. (2004). The convergence of transportation, information technology, and visitor experience at Acadia National Park. *Journal of Travel Research, 43*(2), 151-160.

Daigle, J.J. (2008). Transportation research needs in national parks: A summary and exploration of future trends. The George Wright Forum 25 (1), 57-64.

Davies, C. (2005). *2005 Travel & Adventure Report.* Washington, DC: Knowledge Management.

Deci, E. L., & Ryan, R. M. (1991, January). A motivational approach to self: Integration in personality. In *Nebraska symposium on motivation* (Vol. 38, pp. 237-288).

De Lollis, B. Travel world tries catering to gen x splurgers. Retrieved from http://usatoday30.usatoday.com/money/biztravel/2005-02-08-xtrav-usat_x.htm

Depp, C., Vahia, I. V., & Jeste, D. (2010). Successful aging: focus on cognitive and emotional health. *Annual Review of Clinical Psychology*, *6*, 527-550.

Dilworth, V.A. (2003). *Visitor perceptions of alternative transportation systems and intelligent transportation systems in National Parks*. Department of Parks, Recreation, and Tourism Sciences, Texas A&M University, College Station, Texas, Berlin.

Driver, B. (1983). *Master list of items for Recreation Experience Preference scales and domains*. Unpublished document. USDA Forest Service, Fort Collins, CO: Rocky Mountain Forest and Range Experiment Station.

Dunning, A. (2005). Impacts of transit in national parks and gateway communities. *Transportation Research Record, 1931,* (1), 129-136.

Dwyer, J. F. (1994). *Customer diversity and the future demand for outdoor recreation* (Vol. 252). DIANE Publishing.

Einolf, C. J. (2009). Will the boomers volunteer during retirement? Comparing the baby boom, silent, and long civic cohorts. *Nonprofit and voluntary sector quarterly, 38*(2), 181-199.

Elder Jr, G. H. (1999). *Children of the Great Depression: Social change in life experience*. Westview Press.

Erikson, E. (1963). *Childhood and society.* New York, NY: Norton.

Fain, M. J. (2003). Should older drivers have to prove that they are able to drive? *Archives of internal medicine*, *163*(18), 2126.

Ferguson Jr, R. W. (2013). The road ahead: The graying of America and its implications for finance and the economy. *Business Economics*, *48*(2), 108-112.

FitzPatrick, M., King, C., & Davey, J. (2013). Getting the Focus Right: New Zealand Baby Boomers and Advertisements for Glasses. *Health marketing quarterly, 30*(3), 281-297.

Fitzpatrick, T. R., & McCabe, J. (2009). Future challenges for senior center programming to serve younger and more active baby boomers. *Activities, adaptation & aging, 32* (3-4), 198-213.

Focalyst. (2007a). *The boomer elite: A brief overview of one of today's most coveted markets.* Retrieved from http://calbooming.sdsu.edu/documents/BoomerElite.pdf

Focalyst. (2007b). *The Sky's the Limit: Travel Trends Among the Baby Boom Generation & Beyond* [White paper].Retrieved from http://assets.aarp.org/rgcenter/general/travel_ trends_1.pdf

Freedman, M. (1999). *Prime time: How baby boomers will revolutionize retirement and transform America.* New York, NY: PublicAffairs.

Freitas, M. (1999). Transportation and the National Park Service. In C. Strong (ed.), National Parks: Transportation alternatives and advanced technology for the 21st century. Western Transportation Institute, Montana State University, Bozeman, Montana, pp. 55-58.

Gibson, H. J. (2006). Leisure and later life: Past, present and future. *Leisure studies, 25*(4), 397-401.

Gibson, H. J., & Singleton, J. F. (Eds.). (2012). *Leisure and Aging: Theory and Practice*. Human Kinetics.

Gigante, S. (2010). *How boomers will impact the health care industry.* Retrieved from http://www.cnbc.com/id/35524106

Gilhooly, M., Hamilton, K., O'Neill, M., Gow, J., Webster, N., Pike, F., & Bainbridge, D. (2002). Transport and ageing: extending quality of life for older people via public and private transport.

Godbey, G., Crawford, D. W., & Shen, X. S. (2010). Assessing hierarchical leisure constraints theory after two decades. *Journal of Leisure Research, 42*(1), 111-134.

Grava, S. (2003). *Urban transportation systems: Choices for communities.* New York, NY: McGraw-Hill.

Gross, D. M. & Scott, S. (1990, July 16). Living: proceeding with caution. *Time, 136*, 3.

Hall, A. F. (Ed.). (1921). *Handbook of Yosemite National Park: A Compendium of Articles on the Yosemite Region*. Putnam.

Hallo, J. C., & Manning, R. (2009). Transportation and recreation: a case study of visitors driving for pleasure at Acadia National Park. *Journal of transport geography, 17,* 491-499

Harrison, G. S. (1975). People and park: reactions to a system of public transportation in Mt-McKinley National Park, Alaska. *Journal of Leisure Research, 7*,6–15

Havlick, D. G. (2002). *No place distant: Roads and motorized recreation on America's public lands.* Island Press: Washington, DC.

Higgs, P. F., & Quirk, F. (2007). "Grey nomads" in Australia: Are they a good model for successful aging and health? *Annals of the New York Academy of Sciences, 1114, (1),* 251-257.

Hoffman, M. D. & Krishnan, E. Exercise behavior of ultramarathon runners: baseline findings from the ULTRA study. *Journal of strength and conditioning research.27*(11): 2939-45.

Holly, F. M., Hallo, J. C., Baldwin, E. D., & Mainella, F. P. (2010). Incentives and disincentives for day visitors to park and ride public transportation at Acadia National Park. *Journal of park and recreation administration, 28, 2,* 74-93.

Holyfield, L., Jonas, L., & Zajicek, A. (2005). Adventure without risk is like Disneyland. *Edgework: The sociology of risk-taking*, 173-186.

Howe, J., McMahon, E., & Propst, L. (1997). *Balancing nature and commerce in gateway communities.* Washington, DC: Island Press.

Hudson, S. (2010). Wooing zoomers: Marketing to the mature traveler. *Marketing Intelligence & Planning, 28* (4), 444-461.

Irwin, D. B., & Simons, J. A. (1994). *Lifespan developmental psychology.* Dubuque, IA: Brown & Benchmark.

Iso-Ahola, S. E., & Mannell, R. C. (2004). Leisure and health. *Work and leisure*, 184-199.

Jang, S. S., & Ham, S. (2009). A double-hurdle analysis of travel expenditure: Baby boomer seniors versus older seniors. *Tourism Management, 30*(3), 372-380.

Javalgi, R. G., Thomas, E. G., & Rao, S. R. (1992). Consumer behavior in the US pleasure travel marketplace: An analysis of senior and nonsenior travelers. *Journal of Travel research, 31*(2), 14-19.

Karasik, D., Demissie, S., Cupples, L. A., & Kiel, D. P. (2005). Disentangling the genetic determinants of human aging: biological age as an alternative to the use of survival measures. *The Journals of Gerontology Series A: Biological Sciences and Medical Sciences*, *60*(5), 574-587.

Keen, J. & Dorell, O. (2012). *National parks, wilderness areas hunt for young visitors.* Retrieved from http://usatoday30.usatoday.com/news/nation/story/2012-04-05/national-parks-young/54057448/1

Keene, D. L., & Handrich, R. R. (2011). Generation x members are "active, balanced and happy". Seriously? The jury expert: The American Society of Trial Consultants.

Keiter, R. B. (2013). *To conserve unimpaired: The evolution of the national park idea.* Washington, DC: Island Press.

Kelly, J. R. (1980). Outdoor recreation participation: A comparative analysis. *Leisure Sciences*, *3*(2), 129-154.

Kempthorne, D. (2007). The future of America's national parks: A report to the President of the United States by the Secretary of the Interior Dirk Kempthorne.*Washington, DC: National Park Service*.

Kinsella, K. & He, W. (2009). *An aging world: 2008.* Retrieved from http://www.census.gov/prod/2009pubs/p95-09-1.pdf

Kleiber, D. A., Walker, G. J., & Mannell, R. C. (2011). *A social psychology of leisure* (2nd ed.). State College, PA: Venture Publishing, Inc.

Kleiber, D., Larson, R., & Csikszentmihalyi, M. (1986). The experience of leisure in adolescence. *Journal of leisure research*.

Kotter-Grühn, D., & Hess, T. M. (2012). The impact of age stereotypes on self-perceptions of aging across the adult lifespan. *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences*, *67*(5), 563-571.

Lehto, X. Y., Jang, S., Achana, F. T., & O'Leary, J. T. (2008). Exploring tourism experience sought: A cohort comparison of baby boomers and the silent generation. *Journal of vacation marketing*, *14*, 237-252.

Light, P. (1988). *The baby boomers.* New York, NY: W.W. Norton & Company.

Lipscombe, N. (1995). Appropriate adventure: participation for the aged. *Australian Parks & Recreation*, *31*(2), 41-45.

Littlejohn, M. & Hollenhorst, S. (2006). *The visitor services project.* Retrieved from http://www.nature.nps.gov/socialscience/docs/VSP_brochure.pdf

Littrell, M. A., Paige, R. C., & Song, K. (2004). Senior travelers: Tourism activities and shopping behaviours. *Journal of vacation marketing, 10 (4),* 348-362.

Louter, D. (2006). *Windshield wilderness: Cars, roads, and nature in Washington's national parks.* University of Washington Press: Seattle, WA.

Mace, B. L., Marquit, J. D., Bates, S. C. (2013). Visitor assessment of the mandatory alternative transportation system at Zion National Park. *Environmental management, 52,* 1271-1285.

Manfredo, M. J., Driver, B. L., & Tarrant, M. A. (1996). Measuring leisure motivation: A meta-analysis of the recreation experience preference scales. *Journal of Leisure Research, 28*(3), 188-213.

Manning, R. E. (2011). *Studies in outdoor recreation* (3rd ed.). Corvallis, OR: Oregon State University Press.

Manning, R. E., & Hallo, J. C. (2010). The Denali Park Road experience: Indicators and standards of quality. *Park Science, 27*(2), 33-41.

Manning, R., Lawson, S., Newman, P., Hallo, J., & Monz, C. (2014a). Principles of Sustainable Transportation in the National Parks. In *Transportation Research Board 93rd Annual Meeting* (No. 14-0566).

Manning, R., Lawson, S., Newman, P., Hallo, J., & Monz, C. (Eds.). (2014b). *Sustainable transportation in the national parks: From Acadia to Zion*. Lebanon, NH: University Press of New England.

McGuire, F. A., Boyd, R. K., Janke, M., & Aybar-Damali, B. (2013). *Leisure and aging: Ulyssean living in later life* (5th ed.). Urbana, IL: Sagamore Publishing.

McGuire, F., & Norman, W. (2005). The role of constraints in successful aging: Inhibiting or enabling? In E. Jackson (Ed.), *Constraints to leisure* (pp. 89-101). State College, PA: Venture Press.

McGuire, F., Samdahl, D. M., Scott, D., & Weissinger, E. (2000). What do we know? not much: the state of leisure and aging research. *Journal of Leisure Research, 32*(1), 97-100.

Miles, M. B., & Huberman, A. M. (1994). *Qualitative data analysis* (2nd ed.). Thousand Oaks, CA: Sage Publications.

Miller, C. A., & Wright, G. R. (1999). An assessment of visitor satisfaction with public transportation services at Denali National Park and Preserve. *Park Science, 19*(2), 18-21.

Moscardo, G., Pearce, P., & Morrison, A. (2001). Evaluating different bases for market segmentation: A comparison of geographic origin versus activity participation for generating tourist market segments. *Journal of Travel & Tourism Marketing*, *10*(1), 29-49.

Muller, T. E. & Cleaver, M. (2000). Targeting the CANZUS baby boomer explorer and adventurer segments. Journal of Vacation Marketing, 6: 154.

Myers, M. E. (2006). Power of the picturesque: Motorists' perceptions of the Blue Ridge Parkway. *Landscape Journal*, *25*(1), 38-53.

Nagourney, E. (2013, May 30). Why am I at a national park? *The New York Times.* Retrieved from http://www.nytimes.com/2013/05/ 30/booming/boomer-visits-to-national-parks-increase.html?ref=ericnagourney&_r=0

National Center for Policy Analysis. Villareal, P. (2012). *How are baby boomers spending their money?* Washington, DC: Author.

National Institute on Aging. (2013). Health & aging: Can we prevent aging? Retrieved from http://www.nia.nih.gov/health/publication/can-we-prevent-aging on 8/14/2013

National Park Service. (2015a). *Grand Canyon announces interim permits for organized groups conducting rim-to-rim and extended day hiking and running.* Retrieved from http://www.nps.gov/grca/parknews/interim-permits-r2r.htm

National Park Service. (2015b). *Half Dome pernmits for day hikers.* Retrieved from http://www.nps.gov/yose/planyourvisit/hdpermits.htm

National Park Service. (2014a). *Annual park recreation visitation.* Retrieved from https://irma.nps.gov/Stats/SSRSReports/Park%20Specific%20Reports/Annual%20Park%20Recreation%20Visitation%20(1904%20-%20Last%20Calendar%20Year)?Park=SEQU

National Park Service (2014b). *Alternative transportation in the parks.* Retrieved from http://www.nps.gov/transportation/alternative_transportation.html

National Park Service. (2013a). *National Park Service Visitor Use Statistics.* Retrieved from https://irma.nps.gov/Stats/.

National Park Service. (2013b). *National historic landmarks program.* Retrieved from http://www.nps.gov/nhl/designations/Lists/MT01.pdf

National Park Service. (2013c). *National park system.* Retrieved from http://www.nps.gov/news/upload/CLASSLST-401-updated-06-14-13.pdf

National Park Service. (2012). A call to action: Preparing for a second century of stewardship and engagement. 2012 update. National Park Service, Washington, DC. Retrieved from http://www.nps.gov/calltoaction/PDF/Directors_Call_to_Action_Report_2012.pdf .

Neher, C., Duffield, J., & Patterson, D. (2013). Valuation of National Park System visitation: the efficient use of count data models, meta-analysis, and secondary visitor survey data. *Environmental management, 52*(3), 683-698.

Neulinger, J. (1981). The psychology of leisure. *The psychology of leisure.*, (Ed. 2).

Nimrod, G. (2007). Expanding, reducing, concentrating and diffusing: Post retirement leisure behavior and life satisfaction. *Leisure Sciences, 29*(1), 91-111.

Nimrod, G., & Janke, M. C. (2012). Leisure across the later life span. In H. J. Gibson & J. F. Singleton (Eds.), *Leisure and aging: Theory and practice* (95-106). Champaign, IL: Human Kinetics.

O'Bannon, G. (2001). Managing our future: The generation X factor. *Public Personnel Management, 30*(1), 95-110.

Outdoor Recreation Resources Review Commission. (1962). *A report to the President and to the Congress by the Outdoor Recreation Resources Review Commission.* Retrieved from http://www.gpo.gov/fdsys/pkg/CZIC-gv53-a545-1962/html/CZIC-gv53-a545-1962.htm

Overbaugh, B., Alessa, L., Chapin, T., Kliskey, A. (2007). *The role of the recreation system in building community resilience and adaptive capacity* [PowerPoint slides]. Retrieved from http://ram.uaa.alaska.edu/Publications/AAAS%20RAM%20Website%200709.pdf

Palmer, J. J. (2002). *In pictures Sequoia & Kings Canyon the continuing story.* (5th ed.). Las Vegas, NV: KC Publications, Inc.

Patterson, I., & Pan, R. (2007). The motivations of baby boomers to participate in adventure tourism and the implications for adventure tour providers. *Annals of Leisure Research, 10*(1), 26-53.

Patton, M. Q. (2002). *Qualitative research and evaluation methods.* (3rd ed.). Thousand Oaks, CA: Sage Publications.

Paxson, C., & Case, A. (2009). Early life health and cognitive function in old age. *American economic review papers and proceedings, 99 (2),* 104-109.

Peden, J. G. & Schuster, R. M. (Eds.). (2005). Proceedings of the 2005 northeastern recreation research symposium. Newton Square, PA: U.S. Forest Service, Northeastern Research Station.

Percival, K. (1999). National parks and the auto: A historical overview. In C. Strong (ed.), National Parks: Transportation alternatives and advanced technology for the 21st century. Western Transportation Institute, Montana State University, Bozeman, Montana, pp. 55-58.

Pettebone, D., Newman, P., Lawson, S. R. Hunt, L., Monz, C., & Zwiefka, J. (2011). Estimating visitors' travel mode choices along the Bear Lake Road in Rocky Mountain National Park. *Journal of transport geography, 19,* 1210-1221.

Pomfret, G. (2006). Mountaineering adventure tourists: A conceptual framework for research. *Tourism management, 27*(1), 113-123.

PR Newsire. (2014). *Summit focuses on $7 trillion longevity marketplace.* Retrieved from http://www.prnewswire.com/news-releases/summit-focuses-on-7-trillion-longevity-marketplace-239237531.html

President's Commission on Americans Outdoors. (1987). *Americans Outdoors: The Legacy, the Challenge, with Case Studies: The Report of the President's Commission*. Washington, D.C.: Island.

Prideaux, B., Wei, S., & Ruys, H. (2001). The senior drive tour market in Australia. *Journal of Vacation Marketing, 7*(3), 209-219.

Radcliff, T. A., Dobalian, A., & Duncan, R. P. (2005). A comparison of seasonal resident and year-round resident hospitalizations in Florida. *Florida Public Health Review*.

Roberts, K. (2012). The end of the long baby-boomer generation. *Journal of Youth Studies, 15*(4), 479-497.

Rozario, P. A. (2006). Volunteering among current cohorts of older adults and baby boomers. *Generations, 30*(4), 31.

Runte, A. (2010). *National parks: The American experience.* Lanham, MD: Taylor Trade Publishing.

Sade, R. M. (2012). The graying of America: Challenges and controversies. *The journal of law, medicine & ethics, 40, 1,* 6-9.

Sangpikul, A. (2008). Travel motivations of Japanese senior travelers to Thailand. *International journal of tourism research, 10 (1),* 81-94.

Scanlon, W. J. (1998). *Long Term Care: Baby Boom Generation Presents Financing Challenges.* Retrieved from http://www.gpo.gov/fdsys/pkg/GAOREPORTS-T-HEHS-98-107/html/GAOREPORTS-T-HEHS-98-107.htm

Scarborough Research. (2012). *Keeping up with the boomers.* Retrieved at http://scarborough.com/press-room/news/keeping-up-with-the-baby-boomers

Schewe, C. D., Meredith, G. E., & Noble, S. M. (2000). Defining moments: Segmenting by cohorts. *Marketing Management, 9*(3), 48-53.

Schmalz, D. L., Hallo, J. C., Griffin, S. F., Kusch, M., & Arce, M. (2014). Development of a healthy parks healthy people strategic action plan for Hot Springs National Park. *Park Science, 30*(2), 37-43.

Schneider, R. L., & Sar, B. K. (1999). The relocation and transfer of older persons: When decision-making combines with ethics. *Journal of Gerontological Social Work, 30*(3-4), 101-115.

Seidman, I. (2006). *Interviewing as qualitative research.* New York: Teachers College Press.

Sellick, M. (2004). Discovery, connection, nostalgia: Key travel motives within the senior market. *Journal of travel & tourism marketing, 17,* (1), 55-71.

Sequoia & Kings Canyon National Park. (2014). *Sequoia Shuttle.* Retrieved from http://www.nps.gov/seki/historyculture/gfshuttle.htm

Sharma, A. (2012). Exploring spatial data analysis of older adult migration: A case study of North Carolina. *Applied geography, 35*(1-2), 327-333.

Shepherd, B.C. (2007). "You get what you give: volunteering is good for employees' bodies and minds", *Employee benefit news,* September 1, p. 1.

Shiftan, Y., Vary, D., & Geyer, D. (2006). Demand for park shuttle services—a stated-preference approach. *Journal of Transport Geography, 14*(1), 52-59.

Sims, C.B., Hodges, J.M., Fly, Stephens, B. (2005). Modeling acceptance of a shuttle system in the Great Smoky Mountains National Park. *Journal of Park and Recreation Administration, 23*(3), 25–44.

Singer, F. J., & Beattie, J. B. (1986). The controlled traffic system and associated wildlife responses in Denali National Park. *Arctic, 39*(3), 195-203.

Smith, S. K., & House, M. (2006). Snowbirds, sunbirds, and stayers: seasonal migration of elderly adults in Florida. *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences, 61*(5), S232-S239.

Social Security Administration. (2015). *Life expectancy calculator.* Retrieved from http://www.socialsecurity.gov/cgi-bin/longevity.cgi

Soulliére, L. E. (1995). *Historic roads in the national park system.* Denver, CO: National Park Service.

Sutter, P. S. (2002). *Driven wild: How the fight against automobiles launched the modern wilderness movement.* Seattle, WA: University of Washington Press.

Swarbrooke, J., Beard, C., Leckie, S., Pomfret, G. (2003). *Adventure tourism: The new frontier.* Butterworth-Heinemann: Burlington, MA.

Taff, D., Newman, P., Pettebone, D., White, D. D., Lawson, S. R., Monz, C., & Vagias, W. M. (2013). Dimensions of alternative transportation experience in Yosemite and Rocky Mountain National Parks. *Journal of Transport Geography,30,* 37-46.

Tashakkori, A., & Teddlie, C. (1998). *Mixed methodology: Combining qualitative and quantitative approaches.* Thousand Oaks, CA: Sage Publications.

Tate, J., Mein, J., Freeman, H., & Maguire, G. (2006). Grey nomads: health and health preparation of older travelers in remote Australia. *Australian family physician, 35 (1-2),* 70-72.

Tholkes, B. (1998). Defining risk. *Camping magazine, 71* (5), 24.

Thomsen, J. M., Powell, R. B., Allen, D. (2014). Park health resources: Benefits, values, and implications. *Park Science, 30*(2), 30-36.

Travel Industry Association of America. (2002). *Mature traveler – edition 2000 publication.* Travel Industry Association of America.

Trenberth, L., & Dewe, P. (2002). The importance of leisure as a means of coping with work related stress: An exploratory study. *Counselling Psychology Quarterly, 15*(1), 59-72.

Turnbull, K. F. (2003). Transports to nature: Transportation strategies enhancing visitor experience of national parks. *TR News, 224,* 15-21.

Tweed, W. C. (2000). *Sequoia & kings canyon: The story behind the scenery.* (8th ed.). Las Vegas, NV: KC Publications, Inc.

Uhlenberg, P., & Miner, S. (1996). Life course and aging: A cohort perspective.

U.S. News & World Report. (2007). *Heading back to college.* Retrieved from http://money.usnews.com/money/retirement/articles/2007/10/26/heading-back-to-college

United States Census Bureau. (2015). *Millenials outnumber baby boomers and are far more diverse, census bureau reports.* Retrieved from https://www.census.gov/newsroom/press-releases/2015/cb15-113.html

United States Census Bureau. (2013). *The 2012 statistical abstract* [data file]. Retrieved from http://www.census.gov/compendia/statab/cats/births_deaths_marriages_divorces/life_expectancy.html

United States Census Bureau. (2011). *2010 census shows nation's population is aging.* Retrieved from http://www.census.gov/newsroom/releases/archives/2010_census/cb11-cn147.html

United States Census Bureau. (2010a). *2010 census* [data file]. Retrieved from 2010.census.gov/2010census/data/

United States Census Bureau. (2010b). *The older population: 2010.* Retrieved from http://www.census.gov/prod/cen2010/briefs/c2010br-09.pdf

United States Census Bureau (2006). *Selected characteristics of baby boomers 42 to 60 years old in 2006.* Retrieved from http://www.census.gov/population/age/publications/files/2006babyboomers.pdf

United States Census Bureau. (2002). *Demographic trends in the 20th century.* Retrieved from http://www.census.gov/prod/2002pubs/censr-4.pdf

United States Department of Agriculture Forest Service. (2014). *The national survey on recreation and the environment*. Retrieved from http://www.srs.fs.usda.gov/compass/issue14/01survey.html

United States Department of Education. (2005). National center for education statistics. Integrated postsecondary education data system. Fall enrollment survey 2005. Washington, DC: Author.

United States General Accounting Office. (2002). Long-Term Care: Aging Baby Boom Generation Will Increase Demand and Burden on Federal and State Budgets. Washington, DC: Author.

University of Idaho. (2014). *Park Studies Unit program.* Retrieved from http://www.uidaho.edu/~/media/Files/orgs/Research%20and%20Economic%20Development/ReResear%20and%20Economic%20Development/Federal%20Programs%20of%20Interest/fy14/FF14%20INT%20Park%20Studies%20Unit

University of Idaho. (2012a). Denali National Park and Preserve Visitor Study. Retrieved from http://psu.uidaho.edu/files/vsp/reports/248_DENA_rept.pdf

University of Idaho. (2012b). Sequoia and Kings Canyon National Parks Visitor Study. Retrieved from http://psu.uidaho.edu/files/vsp/reports/258_SEKI_rept.pdf

University of Idaho. (2010). Acadia National Park Visitor Study. Retrieved from http://psu.uidaho.edu/files/vsp/reports/221_ACAD_rept.pdf

University of Idaho. (2009). Great Smoky Mountains National Park Visitor Study. Retrieved from http://psu.uidaho.edu/files/vsp/reports/205.2_GRSM_rept.pdf

University of Idaho. (1999). Acadia National Park Visitor Study. Retrieved from http://psu.uidaho.edu/files/vsp/reports/108_ACAD_rept.pdf

University of Idaho. (1997). Great Smoky Mountains National Park Visitor Study. Retrieved from http://psu.uidaho.edu/files/vsp/reports/88_GRSM_rept.pdf on

University of Idaho. (1989). Denali National Park and Preserve. Retrieved from http://psu.uidaho.edu/files/vsp/reports/18_DENA_rept.pdf

Vaillant, G. (2002). *Aging well: Surprising guideposts to a happier life*. Scribe Publications.

Vaupel, J.W. (2010). Biodemography of human ageing. *Nature, 464,* 536-542.

Vaupel, J.W., & v. Kistowski, K.G. (2005). Broken limits to life expectancy. *Ageing horizons, 3,* 6-13.

Verbrugge, L. M., Gruber-Baldini, A. L., & Fozard, J. L. (1996). Age differences and age changes in activities: Baltimore Longitudinal Study of Aging. *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences, 51*(1), S30-S41.

Vincent, G. K. & Velkoff, V. A. (2010). The next four decades. Retrieved from http://www.census.gov/prod/2010pubs/p25-1138.pdf

Weber, J. (2012). The evolving Interstate Highway System and the changing geography of the United States. *Journal of Transport Geography, 25,* 70-86.

Weimann, G. (2005). Marketing to baby boomers makes sense. *ASHA Leader, volume* 10, (9), p. 21. Retrieved from http://www.asha.org/leader.aspx

White, D. D. (2007). An interpretive study of Yosemite National Park visitors' perspectives toward alternative transportation in yosemite valley. *Environmental Management, 39,* 50-62.

White, D. D., Aquino, J. F., Budruk, M., & Golub, A. (2011). Visitors' experiences of traditional and alternative transportation in Yosemite National Park. *Journal of park and recreation administration, 29, 1,* 38-57.

Wilson, D. (n.d.) *A study of activity selection of visitors to Sequoia & Kings Canyon National Parks.* Unpublished manuscript. Department of Parks, Recreation and Tourism Management, Clemson University, Clemson, SC.

World Tourism Organization. (2004). *Technical seminar on cultural tourism and poverty alleviation.* Retrieved from pub.unwto.org/WebRoot/Store/Shops/Infoshop/Products/1391/1391-1.pdf

APPENDICES

Appendix A

Quantitative Instrument

# SEQUOIA & KINGS CANYON NATIONAL PARKS SURVEY OF VISITORS' ACTIVITY SELECTION

2014

After you complete this questionnaire, please return it to the field researcher

*All responses are confidential*

Thank you for your participation

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This study is funded and conducted by:

CLEMSON UNIVERSITY

| Survey # | Date | Initials |
|---|---|---|
| | | |

**1**. a) Have you visited Sequoia-Kings Canyon National Parks (SEKI) before? (*Please check one box*).

□ Yes. □ No. (*if no, skip to question 2*)

b) Approximately how many times have you visited SEKI before this trip?

Number of previous visits: _____

**2.** Do you have children who live at home with you? (*please check one box*).

□ Yes.

□ No.

**3.** Do you work? (*please check one box*).

□ Yes. Do you work part or full-time? □ part □ full

□ No.

**4.** In what year were you born? _____

**5.** What is your gender? (*please check one box*).

□ Male □ Female

**6.** Do you live in the United States? (please check one)

□ Yes. What is your U.S. zip code? _____

□ No. What country do you live in? _____

**7**. Please indicate which activities you participated in, or plan to participate in during this visit by checking how important that activity was, or is to your visit. Only rate the activities you participated in, or plan to participate in. (*Please circle one number for each row*).

| Activity | Did NOT Participate | Very Unimportant | Unimportant | Neutral | Important | Very Important |
|---|---|---|---|---|---|---|
| **Camping in developed campground** | dn | 1 | 2 | 3 | 4 | 5 |
| **Picknicking** | dn | 1 | 2 | 3 | 4 | 5 |
| **Cave tour** | dn | 1 | 2 | 3 | 4 | 5 |
| **Horseback Riding** | dn | 1 | 2 | 3 | 4 | 5 |
| **Creative arts (photography/painting/ writing)** | dn | 1 | 2 | 3 | 4 | 5 |
| **Fishing** | dn | 1 | 2 | 3 | 4 | 5 |
| **Day hiking or walking** | dn | 1 | 2 | 3 | 4 | 5 |
| **Overnight backpacking** | dn | 1 | 2 | 3 | 4 | 5 |
| **Scenic driving** | dn | 1 | 2 | 3 | 4 | 5 |
| **Swimming and other water activities** | dn | 1 | 2 | 3 | 4 | 5 |
| **Sightseeing** | dn | 1 | 2 | 3 | 4 | 5 |
| **Wildlife viewing/birdwatching** | dn | 1 | 2 | 3 | 4 | 5 |
| **Other_____ _____ _** | dn | 1 | 2 | 3 | 4 | 5 |

**8**. Please indicate your agreement with each of the following reasons for the activities you enjoyed in SEKI by circling one number for each statement:

| | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |
|---|---|---|---|---|---|
| **You prefer to participate in outdoor activities.** | 1 | 2 | 3 | 4 | 5 |
| **You have sufficient time to devote to the activities you choose.** | 1 | 2 | 3 | 4 | 5 |
| **You consider yourself adventurous.** | 1 | 2 | 3 | 4 | 5 |
| **You enjoy activities that involve an element of risk.** | 1 | 2 | 3 | 4 | 5 |
| **You consider yourself healthy.** | 1 | 2 | 3 | 4 | 5 |
| **You consider yourself active.** | 1 | 2 | 3 | 4 | 5 |

**9**. Please indicate your agreement with each of the following reasons for visiting SEKI by circling one number for each statement:

**"I chose to visit SEKI because I want..."**

| | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |
|---|---|---|---|---|---|
| **To be away from crowds of people** | 1 | 2 | 3 | 4 | 5 |
| **To be on my own** | 1 | 2 | 3 | 4 | 5 |
| **To show others you can do it** | 1 | 2 | 3 | 4 | 5 |
| **To experience excitement** | 1 | 2 | 3 | 4 | 5 |
| **To test your endurance** | 1 | 2 | 3 | 4 | 5 |
| **To feel my independence** | 1 | 2 | 3 | 4 | 5 |
| **To be in control of things that happen** | 1 | 2 | 3 | 4 | 5 |
| **To learn more about nature** | 1 | 2 | 3 | 4 | 5 |
| **To learn about things there** | 1 | 2 | 3 | 4 | 5 |
| **To discover something new** | 1 | 2 | 3 | 4 | 5 |
| **To be with members of your group** | 1 | 2 | 3 | 4 | 5 |
| **To be with others who enjoy the same things you do** | 1 | 2 | 3 | 4 | 5 |
| **To be with people having similar values** | 1 | 2 | 3 | 4 | 5 |
| **To talk to new and varied people** | 1 | 2 | 3 | 4 | 5 |
| **To be with and observe other people using the area** | 1 | 2 | 3 | 4 | 5 |
| **To view the scenery** | 1 | 2 | 3 | 4 | 5 |
| **To view the scenic beauty** | 1 | 2 | 3 | 4 | 5 |
| **To be close to nature** | 1 | 2 | 3 | 4 | 5 |
| **To think about your personal values** | 1 | 2 | 3 | 4 | 5 |
| **To think about who you are** | 1 | 2 | 3 | 4 | 5 |
| **To help release or reduce some built-up tensions** | 1 | 2 | 3 | 4 | 5 |
| **To have your mind move at a slower pace** | 1 | 2 | 3 | 4 | 5 |
| **To avoid everyday responsibilities for awhile** | 1 | 2 | 3 | 4 | 5 |
| **To experience tranquility** | 1 | 2 | 3 | 4 | 5 |
| **To share what you have learned with others** | 1 | 2 | 3 | 4 | 5 |
| **To lead other people** | 1 | 2 | 3 | 4 | 5 |
| **To be near others who could help if you need them** | 1 | 2 | 3 | 4 | 5 |
| **To know that others are nearby** | 1 | 2 | 3 | 4 | 5 |
| **To avoid the unexpected** | 1 | 2 | 3 | 4 | 5 |

| | | | | | |
|---|---|---|---|---|---|
| **To be sure of what will happen to you** | 1 | 2 | 3 | 4 | 5 |
| **To take risks** | 1 | 2 | 3 | 4 | 5 |
| **To chance dangerous situations** | 1 | 2 | 3 | 4 | 5 |
| **To experience the risks involved** | 1 | 2 | 3 | 4 | 5 |

**10.** In this section you will find two people talking about how they accomplish things in their life. We would like you to decide which person is more similar to you—in other words which one behaves most like the way you do.

1) Please select the statement more similar to you by placing an **X mark** next to it.

2) After you pick the statement, rate the similarity of it to you by circling a number on a scale from 1 to 4 (1=little similarity, 4=exactly me).

When it becomes harder for me to get the same results as I used to, I keep trying harder until I can do it as well as before.

When it becomes harder for me to get the same results as I used to, it is time to let go of that expectation.

How similar is it to you?
(A little) 1.....2.....3.....4 (Exactly)

When I can't do something important the way I did before, I look for a new goal.

When I can't do something important the way I did before, I distribute my time and energy among many other things.

How similar is it to you?
(A little) 1.....2.....3.....4 (Exactly)

When I can't do something as well as I used to, I think about what exactly is important to me.

When I can't do something as well as I used to, I wait and see what comes.

How similar is it to you?
(A little) 1.....2.....3.....4 (Exactly)

When things don't go as well as they used to, I keep trying other ways until I can achieve the same results I used to.

When things don't go as well as they used to, I accept it.

How similar is it to you?
(A little) 1.....2.....3.....4 (Exactly)

I keep working on what I have planned, until I succeed.

When I do not succeed right away at what I want to do, I don't try other possibilities for very long.

How similar is it to you?
(A little) 1.....2.....3.....4 (Exactly)

When things don't go as well as before, I choose one or two important goals.

When things don't go as well as before, I still try to keep all my goals.

How similar is it to you?
(A little) 1.....2.....3.....4 (Exactly)

I make every effort to achieve a given goal.

I prefer to wait for a while and see if things will work out by themselves.

How similar is it to you?
(A little) 1.....2.....3.....4 (Exactly)

I concentrate all my energy on few things.

I divide my energy among many things.

How similar is it to you?
(A little) 1.....2.....3.....4 (Exactly)

If something matters to me, I devote myself fully and completely to it.

Even if when something matters to me, I still have a hard time devoting myself fully and completely to it.

How similar is it to you?
(A little) 1.....2.....3.....4 (Exactly)

When something in my life isn't working as well as it used to, I ask others for advice or help.

When something in my life isn't working as well as it used to, I decide what to do about it myself, without involving other people.

How similar is it to you?
(A little) 1.....2.....3.....4 (Exactly)

I always focus on the one most important goal at a given time.

I am always working on several goals at once.

How similar is it to you?
(A little) 1.....2.....3.....4 (Exactly)

When I think about what I want in life, I commit myself to just one or two important goals.

Even when I really consider what I want in life, I wait and see what happens instead of committing myself to just one or two particular goals.

How similar is it to you?
(A little) 1.....2.....3.....4 (Exactly)

**11.** There is a free shuttle bus system in SEKI (Sequoia Shuttle) during the summer months. Did you or will you use this system during your visit? (*Please check one box below).*

□ Yes □ No

**12.** We would like to know how you felt about traveling around SEKI on this visit. For each item below please rate how much you think it describes your travel experience in SEKI. (*Please circle one number for each row).*

| | **Strongly Disagree** | **Disagree** | **Neutral** | **Agree** | **Strongly Agree** |
|---|---|---|---|---|---|
| **You have easy access to important sites and attractions** | 1 | 2 | 3 | 4 | 5 |
| **You have little impact on the area's natural environment** | 1 | 2 | 3 | 4 | 5 |
| **It takes too long to get where you want to go** | 1 | 2 | 3 | 4 | 5 |
| It is easy to access scenic overlooks, vistas or locations | 1 | 2 | 3 | 4 | 5 |
| **You hear natural sounds** | 1 | 2 | 3 | 4 | 5 |
| You feel stressed while traveling | 1 | 2 | 3 | 4 | 5 |
| You experience a sense of freedom | 1 | 2 | 3 | 4 | 5 |
| You connect with the natural environment | 1 | 2 | 3 | 4 | 5 |
| **You could go "where you want, when you want"** | 1 | 2 | 3 | 4 | 5 |
| You experience conflict | 1 | 2 | 3 | 4 | 5 |
| You feel crowded | 1 | 2 | 3 | 4 | 5 |

**13.** Additional comments (OPTIONAL)

Appendix B

Interview Script

SEQUOIA-KINGS CANYON NATIONAL PARKS

GUIDING QUESTIONS FOR INTERVIEWS RELATED TO SEQUOIA SHUTTLE RIDERSHIP

2014

Date: _____ Number:_____

Hi, my name is Dustin Wilson. I'm from Clemson University and its department of Parks, Recreation and Tourism Management. We're gathering information on visitor use of transportation at Sequoia & Kings Canyon National Parks. Could I ask you a few questions about your experience to and in Sequoia-Kings Canyon? Participation is voluntary and your responses will be anonymous. The interview will take about fifteen minutes.

If No: Okay. Thank you for your time so far. Have a great day.

If yes: Okay. I'd like to record our conversation so I can remember it later on. Is this okay with you?

1. Is this your first visit to Sequoia-Kings Canyon (SEKI)?

2. Why did you decide to visit?

3. How did you plan your visit to SEKI?

4. What information sources did you find to be most helpful in planning your visit?

> [Follow-up probes] Where did you get this information? When did you get this information?

5. Are you predominately using your car to travel through SEKI? If so, what is it about using your car that you like? What do you dislike?

6. Are you familiar with the Sequoia Shuttle bus service?

> [If yes]
> Could you tell me what you know about it?
>
> How did you learn about the Sequoia Shuttle bus service?
>
> Have you ridden the Sequoia Shuttle bus during this visit to SEKI? What about previous visits? Why or why not?
>
> [If no, briefly explain the Sequoia Shuttle bus service: In summer, the Sequoia Shuttle offers four free bus routes serving destinations in and around the Giant Forest and Lodgepole area, from Dorst Campground to Moro Rock. Shuttles run seven days a week. All buses are wheelchair accessible.

What would have been the best way to make you aware of the Sequoia Shuttle bus service?

As a visitor to SEKI, would you park your car and ride the Sequoia Shuttle bus to visit Sequoia or Kings Canyon National Parks? Why or why not?

7. What would encourage you to stop driving your car and ride the Sequoia Shuttle bus in SEKI?

Would the integration of more technology on buses encourage you to stop and ride? Why or why not?

Would the integration of a historic-looking bus encourage you to stop and ride? Why or why not?

8. What does the concept of freedom mean to you when you think about travelling in SEKI?

What creates a sense of transportation freedom?

What detracts from a sense of transportation freedom?

9. How does the freedom to go where you want to, or when you want to, influence your decision to ride the Sequoia Shuttle?

10. Public transportation in parks, like the Sequoia Shuttle, is less often used by older visitors.

Why do you think this is the case? Freedom is often given as a reason. Why do you think freedom in transportation is more important for older visitors?

11. What would discourage you from stopping at one of the five main parking areas and riding the Sequoia Shuttle bus in Sequoia?

Does your party include small children, or elderly or disabled persons? Would this discourage you from stopping and riding? Why or why not?

12. That was my last question for you. Before we end, I wanted to make sure that you do not have anything you might like to add – anything I forgot to ask you about?

*Thank you very much for your time today? Have a great rest of your trip!*

Appendix C

SOC Questionnaire (Short Version)

| | Elective Selection | |
|---|---|---|
| Item | Target | Distractor |
| ES1 | I concentrate all my energy on few things. | I divide my energy among many things. |
| ES2 | I always focus on the one most important goal at a given time. | I am always working on several goals at once. |
| ES3 | When I think about what I want in life, I commit myself to one or two important goals. | Even when I really consider what I want in life, I wait and see what happens instead of committing myself to just one or two particular goals. |
| | Loss-based Selection | |
| LBS1 | When things don't go as well as before, I choose one or two important goals. | When things don't go as well as before, I still try to keep all my goals. |
| LBS2 | When I can't do something important the way I did before, I look for a new goal. | When I can't do something important the way I did before, I distribute my time and energy among many other things. |
| LBS3 | When I can't do something as well as I used to, I think about what exactly is important to me. | When I can't do something as well as I used to, I wait and see what comes. |
| | Optimization | |
| OP1 | I keep working on what I have planned until I succeed. | When I do not succeed right away at what I want to do, I don't try other possibilities for very long. |
| OP2 | I make every effort to achieve a given goal. | I prefer to wait for a while and see if things will work out by themselves. |
| OP3 | If something matters to me, I devote myself fully and completely to it. | Even if when something matters to me, I still have a hard time devoting myself fully and completely to it. |
| | Compensation | |
| CO1 | When things don't go as well as they used to, I keep trying other ways until I can achieve the same result I used to. | When things don't go as well as they used to, I accept it. |
| CO2 | When something in my life isn't working as well as it used to, I ask others for advice or help. | When something in my life isn't working as well as it used to, I decide what to do about it myself, without involving other people. |
| CO3 | When it becomes harder for me to get the same results, I keep trying harder until I can do it as well as before. | When it becomes harder for me to get the same results as I used to, it is time to let go of that expectation. |